


**MALTA**



**National  
Chemicals  
Management  
Profile**



November 2009

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United Nations Institute for Training and Research



Regional Activity Centre  
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## Executive Summary of the National Profile

More than hundred countries all over the world have embarked on the preparation of the National Chemicals Management Profiles with the involvement of a wide range of national stakeholders, following the recommendations issued by the IFCS and based on the IFCS-endorsed (UNITAR/IOMC) National Profile Guidance Document which was published in 1996. At last it was Malta's turn to prepare its own National Profile.

The National Chemical Profile explains the current situation of the chemical industry and gives an overview of the legal instruments that are being used by different authorities to control chemicals. Furthermore, data communication and sharing of information among authorities and NGOs are also described. In the first chapter there is a statistical description of Malta.

The preparation of the National Profile has contributed to the continuation of the accomplishment of important targets for the improvement of chemical safety. The communication skills among the entities concerned with the management of chemicals were greatly enhanced as a result of the preparation of the National profile. The necessity to invest in educating the public to promote awareness on the responsibility of chemical use was also recognized.

The profile has contributed to a better understanding of the existing/potential problems or weaknesses present in the chemical management system. The profile has also determined key priority areas for action, including the importance of environmental permitting, the need to establish a poisons centre, the major concerns related to potential groundwater pollutants, the lack of hazardous waste treatment facilities, and the issue on chemical data collection as part of a new notification mechanism. One of the limitations observed in the operational needs for the management and control of chemicals is the lack of both human and financial resources.

**Keywords:** Legal instruments, poisons centre, groundwater pollution, waste, environmental permitting, chemical data

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## Abbreviations/Acronyms

A & E: Accident and Emergency Department at MDH

ADR: *Accord européen relatif au transport international des marchandises dangereuses par route*, i.e. the European Agreement concerning the International Carriage of Dangerous Goods by Road, concluded at Geneva on the 30<sup>th</sup> September 1957, as amended

ADT: Malta Transport Authority

AFM: Armed Forces of Malta

APEA: The Association for Petroleum and Explosives Administration

AT/FL/OX Vehicles: Vehicles specifically intended for the carriage of dangerous goods by road other than EXII or EXIII vehicles

BCC: Biosafety Co-ordinating Committee

BICC: Building Industry Consultative Council

CAC: Consumer Affairs Council

CCA: COMAH Competent Authority

CD: Customs Division

CHOGM: Commonwealth Heads of Government Meeting

CIF: Cost, Insurance, Freight

CLP: Classification, Labelling and Packaging of Dangerous Substances and Mixtures

CN: Combined Nomenclature

COMAH: Control of Major Accident Hazards

CPD: Civil Protection Directorate

CPHL: Chemistry Public Health Laboratory

CSD: Commission for Sustainable Development

CWA: Chemical Weapon Agents

DA: Department of Agriculture

DIER: Department of Industrial and Employment Relations

DEH: Department for Environmental Health

DGSA: Dangerous Goods Safety Adviser

DHIS: Department of Health Information and Research

DLG: Department for Local Government

ECHA: European Chemicals Agency

EPA: Environment Protection Act

EPD: Environment Protection Directorate (MEPA)

ERT: Emergency Response Team

ESDP: European Security and Defence Policy

ETC: Employment Training Centre

EU: European Union

EXII/EXIII Vehicles: Vehicles specifically intended for the carriage of explosives

FAO: Food and Agriculture Organization of the United Nations

FOB: Free on Board

FoE: Friends of the Earth (Malta)

GATT: General Agreement on Tariffs and Trade

GLP: Good Laboratory Practice

GMP: Good Manufacturing Practice

GRTU: General Retailer Traders' Union

GVA: Gross Value Added

HS: Harmonized Commodity Description and Coding System

ICT: Information and Communications Technology

IFCS: Intergovernmental Forum on Chemical Safety

ILO: International Labour Organisation

IOMC: Inter-Organization Programme for the Sound Management of Chemicals

IPCS: International Programme on Chemical Safety

IRPTC: International Register of Potentially Toxic Chemicals

ISG: Inter-sessional Group of the Intergovernmental Forum on Chemical Safety

ISO: International Organization for Standardization

ITS: Institute of Tourism Studies

LN: Legal Notice

LPG: Liquid Petroleum Gas

MCAST: Malta College of Arts, Science and Technology

MCST: Malta Council of Science and Technology

MDH: Mater Dei Hospital

MEDC: Ministry of Education, Culture, Youth and Sport

MEGC: Multiple Element Gas Container

MEPA: Malta Environment and Planning Authority

MEU: Management Efficiency Unit

MEUSAC: Malta-EU Steering Action Committee

MFA: Ministry of Foreign Affairs

MFEI: Ministry of Finance, the Economy and Investment

MITA: Malta Information Technology Agency

MITC: Ministry for Infrastructure, Transport and Communications

MJHA: Ministry for Justice and Home Affairs

MMA: Malta Maritime Authority

MOU: Memorandum of Understanding

MPHL: Microbiology Public Health Laboratory

MRA: Malta Resources Authority

MARRA: Ministry for Resources and Rural Affairs

MSA: Malta Standards Authority

MSD: Market Surveillance Directorate

MSOC: Ministry for Social Policy

MTA: Malta Tourism Authority

MVR: Motor Vehicle Regulations (Chapter 65 of the Laws of Malta)

NAB-MALTA: National Accreditation Board (Malta)

NGO: Non-governmental organization

NRL: National Reference Laboratory

NSO: Not otherwise specified

NSO: National Statistics Office

OECD: Organisation for Economic Co-operation and Development

OHSA: Occupational Health and Safety Authority

OPM: Office of the Prime Minister

PCA: Pesticides Control Act

PFP: Partnership for Peace

PHD: Plant Health Department

PHL: Public Health Laboratory

PPE: Personal Protective Equipment

PPP: Plant Protection Products

PSA: Product Safety Act

RAD: Regulatory Affairs Directorate

REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals

ROHS: Restriction of use of hazardous substances

SDO: Staff Development Organisation

SVHC: Substances of Very High Concern

TSD: Trade Services Directorate

UN: United Nations

UNEP: United Nations Environment Programme

UNEP IE/PAC: Industry and Environment Programme Activity Centre

UNIDO: United Nations Industrial Development Organization

UNITAR: United Nations Institute for Training and Research

UNWTO: United Nations World Tourism Organisation

UOM: University of Malta

VOC: Volatile Organic Carbon

WSC: Water Services Corporation

WHO: World Health Organization

WTO: World Trade Organization

## Introduction

Within the framework of a convention on chemical safety, the Intergovernmental Forum on Chemical Safety (IFCS) was established to direct through recommendations the governments as well as the international organizations-members to adopt methods for the safer management of chemical substances and products. For the development of a closer international cooperation on chemical safety matters, the IFCS suggested the preparation by each Member State of its National Profile, which shall include a review of the present legislation and the procedures relating to matters of chemicals management and shall present in an easy and comprehensive manner the involved entities. The United Nations Institute for Training and Research (UNITAR) has published, together with the IFCS Secretariat, a guidance document to support the Member States in the preparation of their National Profile.

In February 2006, the International Conference on Chemicals Management (ICCM) endorsed the Strategic Approach setting the stage for continued assistance to countries to meet the Strategic Approach to International Chemicals Management (SAICM) 2020 goal of sound chemicals management. The UNITAR has adapted its services to countries in order to fully address the outcomes of ICCM. To support national SAICM implementation and enabling activities, UNITAR has developed and revised a number of key guidance materials, including: Preparing a National Profile to Assess the National Infrastructure for Management of Chemicals.

The development of the National Profile of each Member State is also an obligation under the programme Agenda 21 (Chapter 19) of the United Nations Conference for the Environment and Development, which was held at the city of Rio in Brazil in 1992 and aimed at the environmentally sound management of chemical substances. Chapter 19 of Agenda 21 is entitled *Environmentally Sound Management of Toxic Chemicals, including Prevention of Illegal International Traffic in Toxic and Dangerous Products*.

The chemical industry plays an important role in the world economy. Countries all over the world have embarked on the preparation of National Chemicals Management Profiles with the involvement of a wide range of national stakeholders, following the recommendations issued by the IFCS and based on the IFCS-endorsed (UNITAR/IOMC) National Profile Guidance Document which was published in 1996.

The responsibility for preparing the National Profile of Chemicals for Malta was undertaken by the Regulatory Affairs Directorate (RAD) within the Malta Standards Authority (MSA), of the Ministry of Finance, the Economy and Investment (MFEI), which has the responsibility for the legislation related to chemicals, including REACH Regulations, the classification, packaging and labelling of the dangerous chemicals, as well as the pesticides regulations.

The MSA was identified as the National Co-ordinator while the following entities as the National Co-ordinating Team (June 2009 - November 2009)<sup>1</sup>:

- Agricultural Department
- Civil Protection Department
- Consumer Affairs Council
- Customs Department
- Department of Environmental Health
- Department of Health Information & Research
- Malta Chamber of Commerce, Enterprise & Industry
- Malta Environment & Planning Authority
- Malta Resources Authority
- Malta Transport Authority
- National Statistics Office
- Occupational Health & Safety Authority
- Plant Health Department
- University of Malta
- WasteServ Ltd.

All the involved government authorities/departments/agencies concerned with chemicals management, as well as the non-governmental organizations, submitted their views on issues of their responsibility for the preparation of the National Profile for Malta.

The National Profile of Chemicals for Malta was mainly prepared so as to contribute:

- to a better understanding of which problems or potential problems related to chemicals exist in Malta and what mechanisms are available to address these problems;
- to identify important gaps or weaknesses in the existing system;
- to facilitate the exchange of information among government ministries/authorities and between government and parties outside of government such as industry, etc.;
- to an improved basis for worker, public and environmental protection as a consequence of improved knowledge and understanding of potential problems and alternative means for addressing them;
- to provide a basis for identifying needs for technical and financial assistance.

To raise awareness on the National Profile, a development planning meeting was held on the 21<sup>st</sup> of July 2009 among the members of the national co-ordinating team. During this meeting the responsibilities of each entity were discussed; agreement on the work plan and timeframe to complete the project was also reached.

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<sup>1</sup> Information on all ministries, government agencies, and other institutions, as well as organizations outside of government, including names and titles of relevant staff is provided in Annex 4



The National Profile Validation and priority setting workshop was held on the 9<sup>th</sup> of November 2009. The main aim of the workshop was to discuss the key priorities and to reach an agreement among the various stakeholders so as to find the most appropriate ways to address the identified problems. The following entities were represented at the workshop:

- Cleaner Technology Centre
- Customs Department
- Department of Environmental Health
- Enemalta Corporation
- Malta Environment & Planning Authority
- Malta National Laboratory
- Malta Resources Authority
- Malta Transport Authority
- Mater Dei Hospital
- National Statistics Office
- Occupational Health & Safety Authority
- Pharmaceutical Manufacturing Sector Group of the MCCEI
- Plant Health Department
- Public Health Laboratory
- University of Malta
- WasteServ Ltd.

It should be clarified here, that throughout the whole document the term Chemicals is used, as a general term which includes chemical substances, chemical mixtures as well as any other articles containing dangerous chemical substances. Furthermore, the present study does not cover the management of chemicals such as food or drugs. The data on food and drugs presented within this National Profile is mainly for information purposes. To constitute an up-to-date and handy index for the management procedures and the legislation for chemicals in Malta, the national profile will be updated at least every three years.

The whole project was supported by the collaboration between UNITAR and the Barcelona Regional Activity Centre for Cleaner Production. MSA would like to express its appreciation to UNITAR and to the Barcelona Centre for their cooperation in this mutual endeavour and for their financial support provided for the activities held in conjunction with the preparation of the National Profile.

## 1. National Background Information

### 1.1. Physical and Demographic Context<sup>2</sup>

Official language(s)	Maltese and English
Form of Government	Democratic Republic
Area	316 km <sup>2</sup>
Population	413,609
Malta's position	Northern Latitude 36°00'00" Eastern Longitude 14°36'00"
Population density (persons per sq. km.) in 2008	1,309
Live births in 2008	4,126
Crude birth rate in 2008	10.0
Marriages in 2008	2,482
Crude marriage rate in 2008	6.0
Deaths in 2008	3,243
Crude death rate in 2008	7.9
Licensed road vehicles/1,000 inhabitants in 2008	712.4
Road casualties/1,000 inhabitants in 2008	2.8
GDP (at market prices) in 2008	€ 5,758.8 million
Unemployment rate in 2008	6.1%
Imports in 2008	€ 3,404.0 million
Exports in 2008	€ 2,030.7 million
Total manufacturing sales in 2008	€ 2,207.7 million
Rainfall in 2008	476.0mm

*Table 1.A.1: Demographic Events (Source: NSO, 2009)*

Year	Live Births			Crude Birth Rate*	Marriages	Crude Marriage Rate*	Deaths			Crude Death Rate*
	Males	Females	Total				Males	Females	Total	
2005	1,984	1,874	3,858	9.6	2,374	5.9	1,576	1,554	3,130	7.8
2006	2,039	1,846	3,885	9.6	2,536	6.3	1,667	1,549	3,216	7.9
2007	2,036	1,835	3,871	9.5	2,476	6.1	1,610	1,501	3,111	7.6
2008	2,151	1,975	4,126	10.0	2,482	6.0	1,668	1,575	3,243	7.9

\*Per 1,000 mid-year population

<sup>2</sup> Source: National Statistics Office (September, 2009), Malta in Figures 2009, Web Site: [http://www.nso.gov.mt/statdoc/document\\_file.aspx?id=2569](http://www.nso.gov.mt/statdoc/document_file.aspx?id=2569)

Figure 1.A: Land Use in Malta 2006 (Source: NSO, 2009)

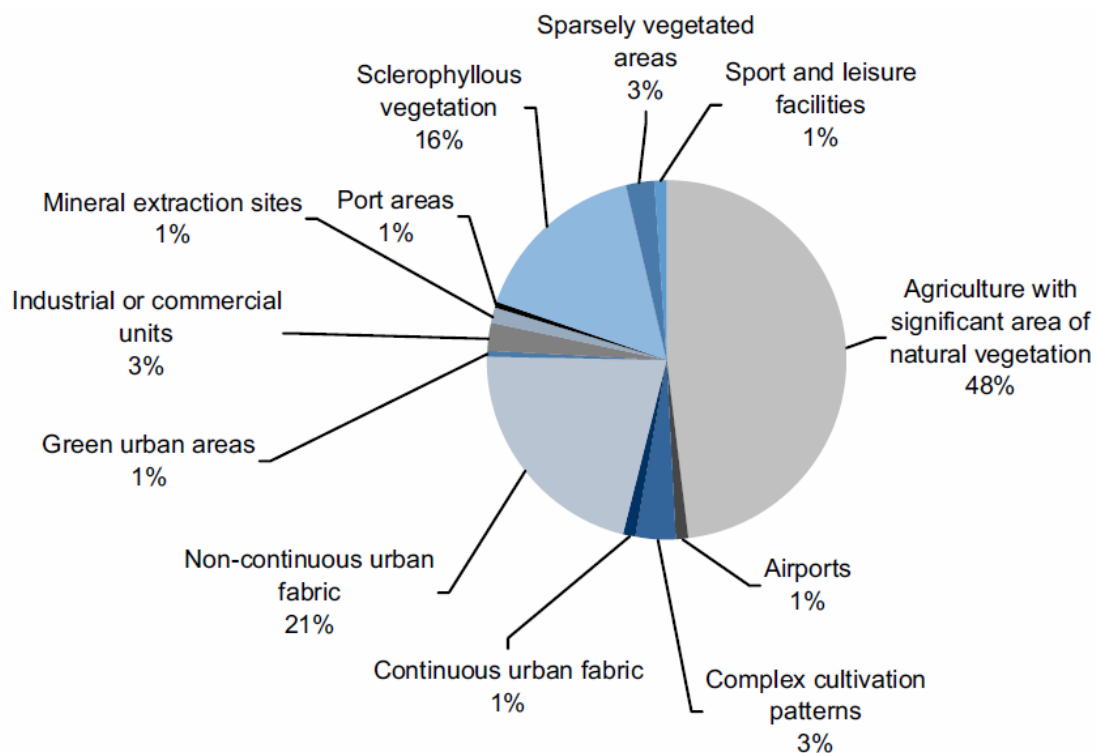


Table 1.A.2: Land under Cultivation (Source: NSO, 2009)

Region	Total Agricultural Land (Ha)			
	Irrigated land	%	Dry land	%
Malta	2,886	90.10	5,148	72.27
Gozo	317	9.90	1,975	27.73
<b>Total</b>	<b>3,203</b>	<b>100.00</b>	<b>7,123</b>	<b>100.00</b>

\*Per 1,000 mid-year population

*Table 1.A.3: Labour Status  
(Source: NSO, 2009)*

Labour Status	2005			2006		
	Males	Females	Total	Males	Females	Total
Employed	103,959	47,627	151,586	104,396	48,082	152,478
Unemployed	7,237	4,523	11,760	7,242	4,683	11,925
Inactive	47,609	112,821	160,430	48,176	113,864	162,040
Total	158,805	164,971	323,776	159,814	166,629	326,443
Percentage						
Employed	65.5	28.9	46.8	65.3	28.9	46.7
Unemployed	4.6	2.7	3.6	4.5	2.8	3.7
Inactive	30.0	68.4	49.5	30.1	68.3	49.6
Total	100.0	100.0	100.0	100.0	100.0	100.0

Labour Status	2007			2008		
	Males	Females	Total	Males	Females	Total
Employed	104,396	51,119	155,515	107,467	53,512	160,979
Unemployed	6,474	4,255	10,729	6,442	3,947	10,389
Inactive	49,902	112,003	161,905	57,695	118,229	175,924
Total	160,772	167,377	328,149	171,604	175,688	347,292
Percentage						
Employed	64.9	30.5	47.4	62.6	30.5	46.4
Unemployed	4.0	2.5	3.3	3.8	2.2	3.0
Inactive	31.0	66.9	49.3	33.6	67.3	50.7
Total	100.0	100.0	100.0	100.0	100.0	100.0

## 1.2. Political/Geographic Structure of the Country

Malta is located in the Mediterranean Sea, just south of Sicily. The Maltese archipelago basically consists of three islands: Malta, Gozo and Comino. The total approximate population of the Maltese Islands is 410,000.

The largest island of the group is Malta, from which the archipelago takes its name. Valletta, the capital, is the cultural, administrative and commercial centre of the archipelago. Malta is well served with harbours, chief of which is the Valletta Grand Harbour. Malta's international airport is situated five kilometres from the capital.

The second largest island, Gozo, is topographically quite different from Malta. Quaintly attractive for its less industrialised way of life, Gozo can be reached from Malta by ferry-boat from Ċirkewwa and Pieta, near Valletta, and by a sea plane service which links the Grand Harbour in Valletta to Mgarr Harbour in Gozo.

Comino, Cominotto, Filfla and St Paul's Islet are the other major features of the archipelago. Of these, only Comino, straddled between Malta and Gozo, sustains a very tiny population. Turned into a popular resort because of a couple of very fine

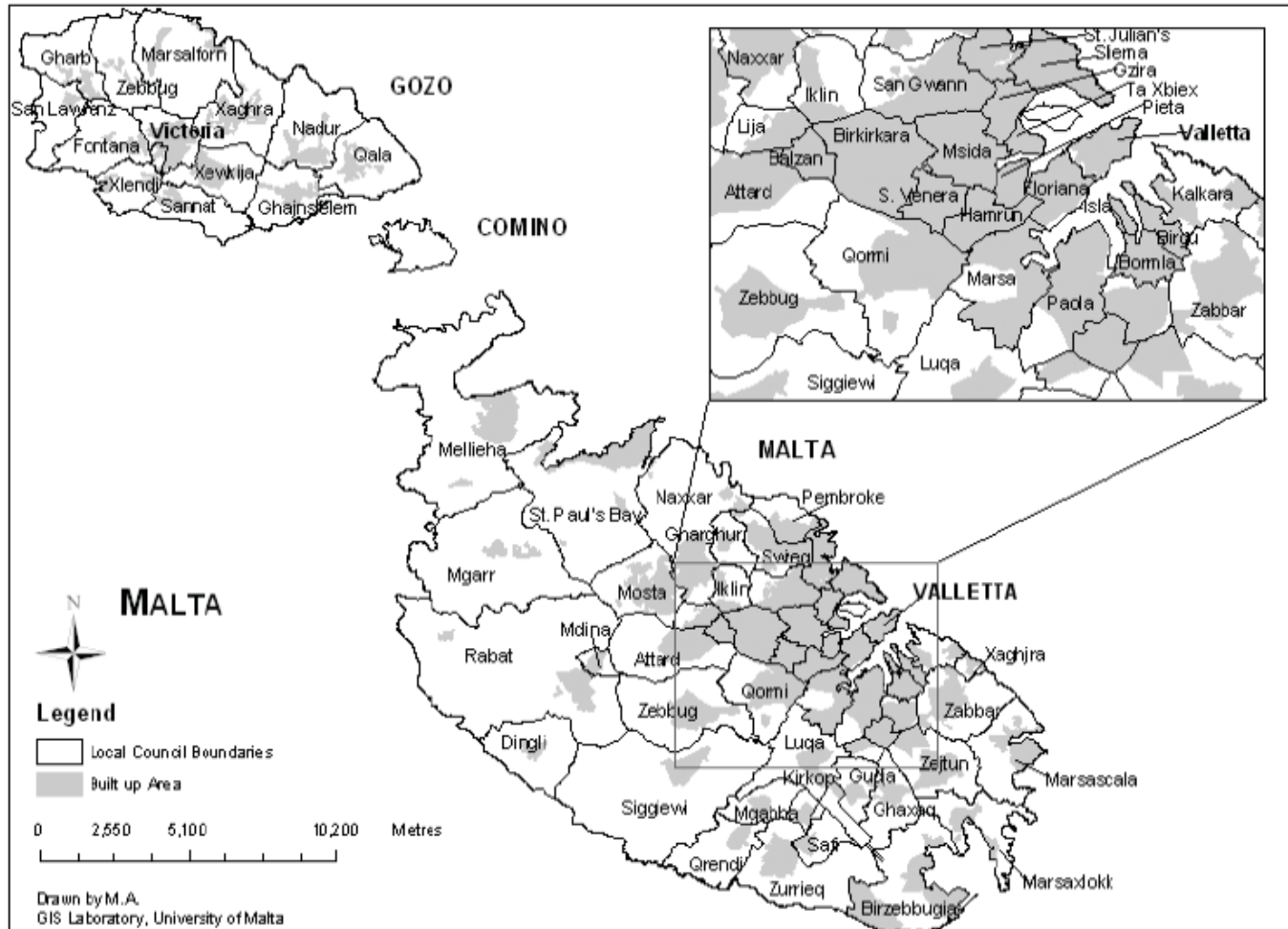
beaches, Comino can be reached from Ċirkewwa, either by boat or by excursion ferries during the summer months.

**Position:** The distance between Malta and the nearest point in Sicily is 93 km. The distance from the nearest point on the North African mainland (Tunisia) is 288 km. Gibraltar is 1,826 km to the west and Alexandria is 1,510 km to the east. This strategic position has allowed Malta to develop as an important trading post. The Malta Freeport is one of the Mediterranean's leading ports for container transshipments.

**Physical Features:** Malta has no mountains or rivers. A series of low hills with terraced fields on the slopes characterize the Island. The coastline of Malta is well indented, thus providing numerous harbours, bays, creeks, sandy beaches and rocky coves. The length of the shoreline round Malta is 136 km, and 43km round Gozo.

**Climate:** It is the climate, more than anything else that has made Malta an important tourist resort in the centre of the Mediterranean. The average winter temperature is 12°C (54°F.) There are really only two seasons in Malta: the dry summer season, and the mild winter season. The average rainfall is 558.2 mm (22 ins). Rain rarely, if ever, falls during the summer months.

Figure 1.B: Map of the Maltese Islands  
(Source: NSO, 2009)



## Local Councils

### *Malta*

Attard	Marsa	Rabat
Balzan	Marsascalea	Safi
Birgu (Vittoriosa)	Marsaxlokk	San Ġiljan
Birkirkara	Mdina	San Ġwann
Birżebbuġa	Mellieħa	San Pawl il-Baħar
Bormla (Cospicua)	Mġarr	Santa Luċija
Dingli	Mosta	Santa Venera
Fgura	Mqabba	Sigġiewi
Floriana	Msida	Sliema
Gudja	Mtarfa	Swieqi
Gżira	Naxxar	Ta' Xbiex
Ħamrun	Għargħur	Tarxien
Iklin	Għaxaq	Valetta
Isla (Senglea)	Paola	Xgħajra
Kalkara	Pembroke	Żabbar
Kirkop	Pietà	Żebbuġ
Lija	Qormi	Żejtun
Luqa	Qrendi	Żurrieq

### *Gozo*

Fontana	Għarb	Sannat
Kerċem	Għasri	Xagħra
Munxar	Qala	Xewkija
Nadur	Rabat (Victoria)	Żebbuġ
Għajnsielem	San Lawrenz	

### 1.3. Industrial, Agricultural, and Other Key Economic Sectors

*Table 1.B.1: Analysis of Gross Value Added by Industry (A31) in Euros (€ '000)<sup>3</sup> for 2008 (Source: NSO, 2009)*

NACE Rev 1.1 (A31)	Economic Sectors and related Activity	2008		
		Output (P.1)	Gross Value Added (B.1*g)	Contribution to Total GVA
AA	Agriculture, hunting and forestry	159,965	76,780	1.53
BB	Fishing	104,854	38,439	0.77
CA	Mining and quarrying of energy producing materials	11,638	3,197	0.06
CB	Mining and quarrying except energy producing materials	21,848	12,706	0.25
DA	Manufacture of food products; beverages and tobacco	362,006	108,748	2.17
DB	Manufacture of textiles and textile products	69,438	28,882	0.58
DC	Manufacture of leather and leather products	2,875	1,125	0.02
DD	Manufacture of wood and wood products	10,931	4,856	0.10
DE	Manufacture of pulp, paper and paper products; publishing and printing	196,116	72,555	1.45
DG	Manufacture of chemicals, chemical products and man-made fibres	237,230	125,707	2.51
DH	Manufacture of rubber and plastic products	102,628	44,203	0.88
DI	Manufacture of other non-metallic mineral products	87,690	33,824	0.67
DJ	Manufacture of basic metals and fabricated metal products	86,963	30,708	0.61
DK	Manufacture of machinery and equipment n.e.c.	37,093	12,566	0.25
DL	Manufacture of electrical and optical equipment	1,058,130	189,193	3.77
DM	Manufacture of transport equipment	159,702	92,007	1.83
DN	Manufacturing n.e.c.	171,599	93,732	1.87
EE	Electricity, gas and water supply	677,707	35,043	0.70
FF	Construction	425,155	178,404	3.56
GG	Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods	815,802	570,687	11.38
HH	Hotels and restaurants	598,063	250,091	4.99
II	Transport, storage and communication	1,068,418	491,171	9.79

<sup>3</sup> Data is provisional and in line with NSO's latest news release 102/2009 published on the 9<sup>th</sup> of June 2009



JJ	Financial intermediation	624,830	226,723	4.52
KK	Real estate, renting and business activities	1,178,157	857,068	17.09
LL	Public administration and defence; compulsory social security	520,593	333,417	6.65
MM	Education	337,033	289,542	5.77
NN	Health and social work	446,420	312,941	6.24
OO	Other community, social and personal service activities	1,098,492	493,282	9.84
PP	Private households with employed persons	7,396	7,312	0.15
	Total Economy	10,678,772	5,014,906	

The Table of Analysis of Gross Value Added by Industry (A31) in Euros (€ '000)<sup>4</sup> for the years 2006 and 2007 can be found in Table A.1 under Annex 2A.

<sup>4</sup> Data is provisional and in line with NSO's latest news release 102/2009 published on the 9<sup>th</sup> of June 2009

*Table 1.B.2: Output Growth rate over three years (%) (2006-2008) (Source: NSO, 2009)*

NACE Rev 1.1 (A31)	Economic Sectors and related Activity	Output Growth rate (%)
AA	Agriculture, hunting and forestry	0.98
BB	Fishing	16.34
CA	Mining and quarrying of energy producing materials	64.57
CB	Mining and quarrying except energy producing materials	8.48
DA	Manufacture of food products; beverages and tobacco	4.20
DB	Manufacture of textiles and textile products	-34.17
DC	Manufacture of leather and leather products	-59.44
DD	Manufacture of wood and wood products	34.27
DE	Manufacture of pulp, paper and paper products; publishing and printing	9.77
DG	Manufacture of chemicals, chemical products and man-made fibres	46.53
DH	Manufacture of rubber and plastic products	5.57
DI	Manufacture of other non-metallic mineral products	12.66
DJ	Manufacture of basic metals and fabricated metal products	19.48
DK	Manufacture of machinery and equipment n.e.c.	-8.90
DL	Manufacture of electrical and optical equipment	-19.06
DM	Manufacture of transport equipment	81.79
DN	Manufacturing n.e.c.	-3.56
EE	Electricity, gas and water supply	21.37
FF	Construction	4.16
GG	Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods	6.62
HH	Hotels and restaurants	9.29
II	Transport, storage and communication	9.01
JJ	Financial intermediation	14.28
KK	Real estate, renting and business activities	8.97
LL	Public administration and defence; compulsory social security	13.23
MM	Education	9.76
NN	Health and social work	25.24
OO	Other community, social and personal service activities	33.20
PP	Private households with employed persons	5.56

*Table 1.C: Structure of the Agricultural Sector by size according to the number of employees per facility (Source: NSO, 2009)*

Year	Micro Farms/ Facilities <sup>5</sup> (%)	Small Farms/ Facilities <sup>6</sup> (%)	Medium Farms/ Facilities <sup>7</sup> (%)	Big Farms/ Facilities <sup>8</sup> (%)
2005	11070	2	0	0
2007	11016	1	0	0

*Table 1.D: Breakdown of Agricultural Production by Year (Source: NSO, 2009)*

Year	Major Crops	Total Value of Crop (000s)	Size of Productive areas (# of hectares)
2005	Potatoes	6697	820
	Vegetables	22490	1594
	Grapes	2044	661
	Forage	2931	4574
Total		34162	7649
2007	Potatoes	6071	712
	Vegetables	27437	1851
	Grapes	2011	751
	Forage	3835	4690
Total		39354	8004

<sup>5</sup> 1 to 15 employees.

<sup>6</sup> 16 to 100 employees.

<sup>7</sup> 101 to 250 employees.

<sup>8</sup> More than 251 employees.

#### 1.4. Industrial Employment by Major Economic Sectors

*Table 1.E: Industrial Employment by Major Economic Sector (Source: NSO, 2009)*

NACE Division	Section	Sub-Section	Description	Number of Facilities	Total Employment
1	A	A	Agriculture, hunting and related service activities	3415	3446
5	B	B	Fishing, operation of fish hatcheries and fish farms	702	703
11	C	CA	Extraction of crude petroleum and natural gas;	17	56
14	C	CB	Other mining and quarrying	62	266
15	D	DA	Manufacture of food products and beverages	564	4149
16	D	DA	Manufacture of tobacco products	2	Confidential
17	D	DB	Manufacture of textiles and textile products	58	449
18	D	DB	Manufacture of wearing apparel	142	651
19	D	DC	Tanning and dressing of leather	17	225
20	D	DD	Manufacture of wood and of products of wood	145	365
21	D	DE	Manufacture of pulp, paper and paper products	23	271
22	D	DE	Publishing, printing and reproduction of recorded	316	2204
23	D	DF	Manufacture of coke and refined petroleum products	2	.
24	D	DG	Manufacture of chemicals and chemical products	84	1090
25	D	DH	Manufacture of rubber and plastic products	68	1716
26	D	DI	Manufacture of other non-metallic mineral products	226	1342
27	D	DJ	Manufacture of basic metals	15	17
28	D	DJ	Manufacture of fabricated metal products	610	1494
29	D	DK	Manufacture of machinery and equipment	52	594
30	D	DL	Manufacture of office machinery and computers	7	180
31	D	DL	Manufacture of electrical machinery and apparatus	45	1368
32	D	DL	Manufacture of radio, television and communication	31	3223
33	D	DL	Manufacture of medical, precision and optical instruments	26	932
34	D	DM	Manufacture of motor vehicles and trailers	16	57
35	D	DM	Manufacture of other transport equipment	79	2180
36	D	DN	Manufacture of furniture; manufacturing n.e.c	1229	2979
37	D	DN	Recycling	23	72

NACE Division	Section	Sub-Section	Description	Number of Facilities	Total Employment
40	E	E	Electricity, gas, steam and hot water supply	1	Confidential
41	E	E	Collection, purification and distribution of water	1	Confidential
45	F	F	Construction	5041	9056
50	G	G	Sale, maintenance and repair of motor vehicles	1856	3239
51	G	G	Wholesale trade and commission trade	3943	10476
52	G	G	Retail trade, except of motor vehicles and motorcycles	9068	14320
55	H	H	Hotels and restaurants	3475	14661
60	I	I	Land transport; transport via pipelines	1416	2258
61	I	I	Water transport	335	595
62	I	I	Air transport	19	1735
63	I	I	Supporting and auxiliary transport activities	1166	4137
64	I	I	Post and telecommunications	85	2676
65	J	J	Financial intermediation, except insurance	94	3978
66	J	J	Insurance and pension funding	21	478
67	J	J	Activities auxiliary to financial intermediation	282	1016
70	K	K	Real estate activities	2599	2028
71	K	K	Renting of machinery and equipment without operator	628	961
72	K	K	Computer and related activities	1150	1678
73	K	K	Research and development	43	46
74	K	K	Other business activities	6709	13396
75	L	L	Public administration and defence; compulsory social security	173	9520
80	M	M	Education	1300	13247
85	N	N	Health and social work	708	8243
90	O	O	Sewage and refuse disposal, sanitation and similar activities	149	223
91	O	O	Activities of membership organizations n.e.c.	405	569
92	O	O	Recreational, cultural and sporting activities	2837	3885
93	O	O	Other service activities	3330	1600
95	P	P	Private households with employed persons	2	Confidential
99	Q	Q	Extra-territorial organizations and bodies	1	
Unknown				1427	55
Total				56240	154105

## 1.5. Releases of Concern by Major Economic Sectors

*Table 1.F: Releases by Type and Media for Major Economic Sectors<sup>9</sup>*

Main Economic Activity	Release Data			
	Pollutant's Name	Total Release to air (kg/year)	Total Release to Coastal water (kg/year)	Total Release to land (kg/year)
Waste Disposal	Methane	671,000	0	0
Waste Disposal	Methane	3,560,000	0	0
Production of Electricity	Carbon Dioxide	814,000,000	0	0
Production of Electricity	Nitrogen oxides	2,310,000	0	0
Production of Electricity	Sulphur Oxides	4,600,000	0	0
Production of Electricity	Arsenic & compounds	44.1	0	0
Production of Electricity	Cadmium & compounds	14.5	0	0
Production of Electricity	Nickel & compounds	2,260	0	0
Production of Electricity	Zinc & compounds	780	0	0
Production of Electricity	Particulate matter (PM <sub>10</sub> )	451,000	0	0
Production of Electricity	Total Nitrogen	0	209,000	0
Production of Electricity	Copper & compounds	0	173	0
Production of Electricity	Carbon Dioxide	1,210,000,000	0	0
Production of Electricity	Nitrogen oxides	3,160,000	0	0
Production of Electricity	Sulphur Oxides	7,840,000	0	0
Production of Electricity	Arsenic & compounds	62.7	0	0
Production of Electricity	Cadmium & compounds	19.0	0	0
Production of Electricity	Nickel & compounds	3,980	0	0
Production of Electricity	Zinc & compounds	1,370	0	0
Production of Electricity	Particulate matter (PM <sub>10</sub> )	338,000	0	0
Production of Electricity	Total Nitrogen	0	1,630,000	0
Production of Electricity	Copper	0	2,490	0
Production of Electricity	Total organic Carbon (TOC)	0	18,100,000	0
Manufacture of basic pharmaceutical products	HCFC	25 (=accidental release)	0	0
Manufacture of metal structures and parts of structures	PM10	62,500	0	0
Manufacture of metal structures and parts of structures	Copper	0	54.6	849.7

<sup>9</sup> Data retrieved from reports covering the year 2007 for installations covered by the E-PRTR (European Pollutant Release and Transfer Register) Regulation, EC 166/2006; the register contains information on releases of pollutants to air, water and land, as well as transfers of waste and pollutants, where emissions exceed certain threshold values and result from specific activities. The register covers as well releases of pollutants from diffuse sources (such as transport). Annex II lists the waste and pollutants covered by the register, which include greenhouse gases, acid rain pollutants, ozone-depleting substances, heavy metals and certain carcinogens such as dioxins. The activities concerned are specified in Annex I, and include in particular those covered by Directive 96/61/EC (the "IPPC" Directive). They include those associated with thermal power stations, mining, quarrying and metalworking industries, chemical plants, paper and timber industries and also waste and waste-water treatment plants.

Main Economic Activity	Release Data			
	Pollutant's Name	Total Release to air (kg/year)	Total Release to Coastal water (kg/year)	Total Release to land (kg/year)
Manufacture of metal structures and parts of structures	Lead	0	22.0	0
Manufacture of metal structures and parts of structures	Nickel	0	0	31.1
Manufacture of metal structures and parts of structures	Arsenic	0	0	9.30
Marine aquaculture	Total Nitrogen	0	187,000	0
Marine aquaculture	Total Phosphorus	0	30,000	0
Marine aquaculture	TOC	0	462,000	0
Marine aquaculture	Total Nitrogen	0	99,400	0
Marine aquaculture	Total Phosphorus	0	18,800	0
Marine aquaculture	Zinc & compounds	0	427	0
Marine aquaculture	TOC	0	322,000	0
Intensive aquaculture	Total Nitrogen	0	51,500	0
Intensive aquaculture	Total Phosphorus	0	7,560	0
Marine aquaculture	Total Phosphorus	0	9,400	0
Marine aquaculture	Zinc & compounds	0	427	0
Marine aquaculture	TOC	0	161,000	0

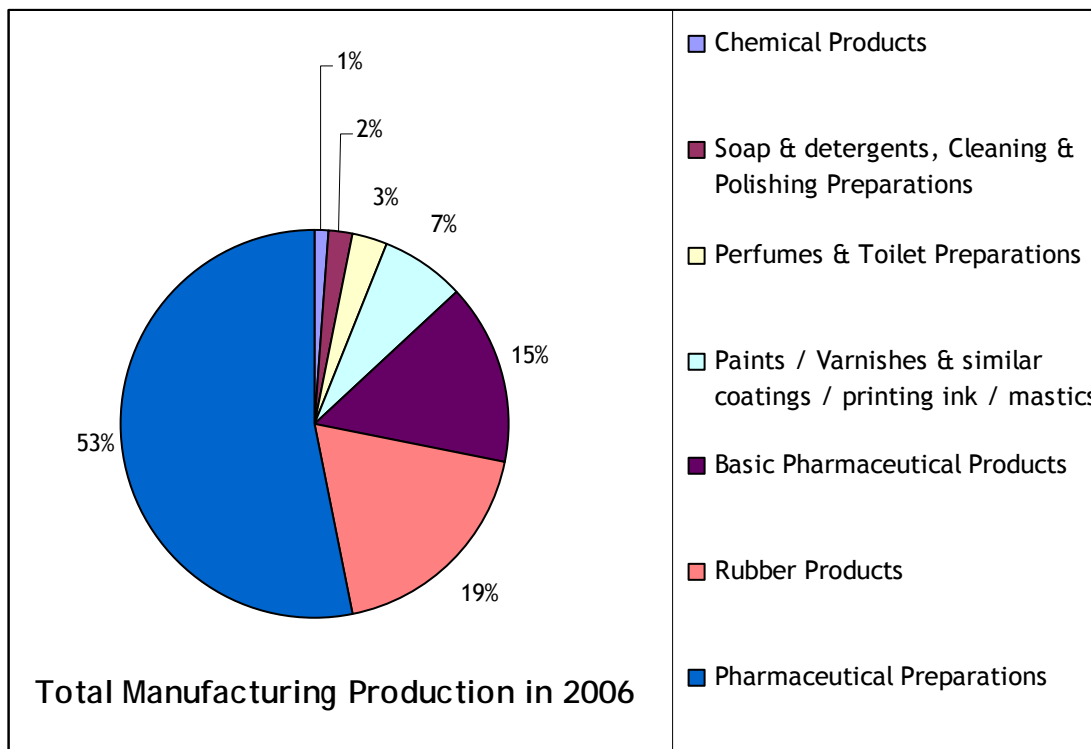
## 2. Chemical Production, Import, Export, Storage, Transport, Use and Disposal

### Introduction

In Malta there is no primary production of chemical substances. The chemical substances that are used by the local industry are mainly purchased from within the EU however some chemicals are also imported from outside the EU.

Malta has been an established EU member state since May 2004. A stable economic, industrial and political environment, excellent language skills, a productive labour force and an attractive incentives package, are just some of the reasons why so many companies are now looking at Malta as their first choice for foreign investment. Undoubtedly, businesses locating to Malta will join a growing band of international companies in the pharmaceutical and medical device sectors that are already operating successfully on the Islands. As can be seen from Figure 2.A the production of pharmaceuticals is the most dominant industry within Malta however a good number of paint manufacturers can be noted.

*Figure 2.A: Total Manufacturing Production of 2006 by Turnover/€ of 2006  
(Source: NSO, 2009)*



Malta is particularly competitive in the processing of pharmaceuticals, organic chemicals and plastics. However, we depend on imports of the raw materials for production. Malta is completely dependent on the imports of raw materials for production and this applies across the board for all industries including the chemical



industry. With regards to inorganic chemicals (Chapter 28) imports from third countries as a percentage of the total was around 15% and imports of organic chemicals (Chapter 29) from third countries as a percentage of the total imports of this sector is approximately 58%<sup>10</sup>. While the chemical sector employs around 0.8% of total employed persons in Malta, as at April 2009, this sector as a whole contributed 2.5% of the Gross Value Added (GVA) to Malta's economy in 2008. In the same year, the manufacture of chemicals, chemical products and man-made fibres contributed towards 14.8% of the country's industrial gross value added from manufacturing activities. Furthermore, pharmaceutical exports as a share of the total exports of chemicals were 93% in 2008.

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<sup>10</sup> Based on NSO data for the period 2002 to 2006

## 2.1. Chemical Production, Import and Export

*Table 2.A.1: Production of 2006 Classified by NACE Class (Source: NSO, 2009)*

NACE Class	Description	Production in Euros (€)
24.13/24.20	Manufacture of other inorganic basic chemicals/Manufacture of pesticides and other agro-chemical products	149865
24.30	Manufacture of paints, varnishes and similar coatings, printing ink and mastics	2948558
24.41	Manufacture of basic pharmaceutical products	6432264
24.42	Manufacture of pharmaceutical preparations	21711657
24.51	Manufacture of soap and detergents, cleaning and polishing preparations	991432
24.52	Manufacture of perfumes and toilet preparations	1166932
24.61	Manufacture of explosives	118576
24.66	Manufacture of other chemical products n.e.c.	519389
25.13	Manufacture of other rubber products	8177120
25.21	Manufacture of plastic plates, sheets, tubes and profiles	437611
25.22	Manufacture of plastic packing goods	5932895
25.23/25.24	Manufacture of builders' ware of plastic/Manufacture of other plastic products	2401098
26.12	Shaping and processing of flat glass	678687
26.13	Manufacture of hollow glass	313705
26.14	Manufacture of glass fibres	284496
26.15	Manufacture and processing of other glass, including technical glassware	821313
26.21	Manufacture of ceramic household and ornamental articles	124029
26.25	Manufacture of other ceramic products	5111
26.51/26.52	Manufacture of cement/Manufacture of lime	36876
26.61	Manufacture of concrete products for construction purposes	4659299
26.63	Manufacture of ready-mixed concrete	4591201
26.66	Manufacture of other articles of concrete, plaster and cement	27776
26.70	Cutting, shaping and finishing of ornamental and building stone	1529880
26.82	Manufacture of other non-metallic mineral products n.e.c.	460910

Table 2.A.2: Total Imports of Chemicals by CN Chapter 2006 - 2008 (Source: NSO, 2009)

Chapter	CIF Value €			Tons		
	2006	2007	2008	2006	2007	2008
CHAPTER 27 - MINERAL FUELS, MINERAL OILS AND PRODUCTS OF THEIR DISTILLATION; BITUMINOUS SUBSTANCES; MINERAL WAXES	307,005,508	420,209,715	573,066,391	889,363.78	1,236,788.07	1,091,956.07
CHAPTER 28 - INORGANIC CHEMICALS; ORGANIC OR INORGANIC COMPOUNDS OF PRECIOUS METALS, OF RARE-EARTH METALS, OF RADIOACTIVE ELEMENTS OR OF ISOTOPES	3,796,478	4,311,413	4,194,242	8,917.96	8,046.98	7,508.47
CHAPTER 29 - ORGANIC CHEMICALS	37,260,754	71,502,774	59,167,900	4,107.29	3,792.49	4,762.88
CHAPTER 30 - PHARMACEUTICAL PRODUCTS	77,786,406	68,901,746	87,302,423	1,930.97	1,672.13	2,437.69
CHAPTER 31 - FERTILISERS	3,339,185	1,129,986	1,428,860	4,760.33	3,841.69	2,857.24
CHAPTER 32 - TANNING OR DYEING EXTRACTS; TANNINS AND THEIR DERIVATIVES; DYES, PIGMENTS AND OTHER COLOURING MATTER; PAINTS AND VARNISHES; PUTTY AND OTHER MASTICS; INKS	21,303,318	24,512,321	25,311,655	21,017.34	20,985.06	18,209.21
CHAPTER 33 - ESSENTIAL OILS AND RESINOIDS; PERFUMERY, COSMETIC OR TOILET PREPARATIONS	38,660,387	39,008,478	41,107,524	4,993.34	4,189.86	4,659.88
CHAPTER 34 - SOAP, ORGANIC SURFACE-ACTIVE AGENTS, WASHING PREPARATIONS, LUBRICATING PREPARATIONS, ARTIFICIAL WAXES, PREPARED WAXES, POLISHING OR SCOURING PREPARATIONS, CANDLES AND SIMILAR ARTICLES, MODELLING PASTES, 'DENTAL WAXES' AND DENTAL PREPARATIONS	17,045,638	18,337,491	19,730,637	11,082.81	11,710.38	14,976.00
CHAPTER 35 - ALBUMINOIDAL SUBSTANCES; MODIFIED STARCHES; GLUES; ENZYMES	2,759,156	2,665,740	3,273,719	1,814.95	1,830.61	1,938.81
CHAPTER 36 - EXPLOSIVES; PYROTECHNIC PRODUCTS; MATCHES; PYROPHORIC ALLOYS; CERTAIN COMBUSTIBLE PREPARATIONS	354,694	418,455	428,207	142.93	126.96	146.02

Chapter	CIF Value €			Tons		
	2006	2007	2008	2006	2007	2008
CHAPTER 37 - PHOTOGRAPHIC OR CINEMATOGRAPHIC GOODS	4,017,169	3,907,856	3,061,849	493.83	459.79	1,314.13
CHAPTER 38 - MISCELLANEOUS CHEMICAL PRODUCTS	14,747,335	14,384,017	15,836,718	8,006.70	8,596.95	8,807.98
CHAPTER 39 - PLASTICS AND ARTICLES THEREOF	126,785,598	147,177,795	133,724,357	44,091.43	42,899.10	47,676.19
Total	654,861,626	816,467,787	967,634,482	1,000,723.65	1,344,940.08	1,207,250.57

Data on the Imports Classified by CN Chapter and Region of Destination (2006- 2008) can be found in Table B.1 under Annex 2.B.

*Table 2.A.3: Total Exports of Chemicals by CN Chapter 2006 - 2008 (Source: NSO, 2009)*

Chapter	FOB Value €			Tons		
	2006	2007	2008	2006	2007	2008
CHAPTER 27 - MINERAL FUELS, MINERAL OILS AND PRODUCTS OF THEIR DISTILLATION; BITUMINOUS SUBSTANCES; MINERAL WAXES	30,052,129	52,035,638	43,522,227	61,323.99	99,198.37	60,272.18
CHAPTER 28 - INORGANIC CHEMICALS; ORGANIC OR INORGANIC COMPOUNDS OF PRECIOUS METALS, OF RARE-EARTH METALS, OF RADIOACTIVE ELEMENTS OR OF ISOTOPES	155,680	561,208	203,224	60.64	81.01	101.21
CHAPTER 29 - ORGANIC CHEMICALS	16,419,374	20,282,668	19,345,433	68.49	51.01	61.99
CHAPTER 30 - PHARMACEUTICAL PRODUCTS	102,747,333	151,840,075	167,908,267	888.08	1,377.48	1,961.91
CHAPTER 31 - FERTILISERS	29,741	147	253	24.00	0.00	0.09
CHAPTER 32 - TANNING OR DYEING EXTRACTS; TANNINS AND THEIR DERIVATIVES; DYES, PIGMENTS AND OTHER COLOURING MATTER; PAINTS AND VARNISHES; PUTTY AND OTHER MASTICS; INKS	2,589,263	3,719,503	3,174,423	605.71	1,030.41	811.61
CHAPTER 33 - ESSENTIAL OILS AND RESINOIDS; PERFUMERY, COSMETIC OR TOILET PREPARATIONS	7,110,390	9,399,948	7,441,066	733.87	653.82	720.58

Chapter	FOB Value €			Tons		
	2006	2007	2008	2006	2007	2008
CHAPTER 34 - SOAP, ORGANIC SURFACE-ACTIVE AGENTS, WASHING PREPARATIONS, LUBRICATING PREPARATIONS, ARTIFICIAL WAXES, PREPARED WAXES, POLISHING OR SCOURING PREPARATIONS, CANDLES AND SIMILAR ARTICLES, MODELLING PASTES, 'DENTAL WAXES' AND DENTAL PREPARATIONS	5,397,030	8,738,157	2,710,155	668.39	759.45	517.47
CHAPTER 35 - ALBUMINOIDAL SUBSTANCES; MODIFIED STARCHES; GLUES; ENZYMES	66,945	123,622	104,828	18.61	75.67	70.30
CHAPTER 36 - EXPLOSIVES; PYROTECHNIC PRODUCTS; MATCHES; PYROPHORIC ALLOYS; CERTAIN COMBUSTIBLE PREPARATIONS	0	1,461	1,669	0.00	0.01	0.57
CHAPTER 37 - PHOTOGRAPHIC OR CINEMATOGRAPHIC GOODS	203,597	205,487	227,837	18.54	28.75	23.22
CHAPTER 38 - MISCELLANEOUS CHEMICAL PRODUCTS	1,652,879	1,681,914	8,889,830	1,241.13	827.24	1,896.79
CHAPTER 39 - PLASTICS AND ARTICLES THEREOF	38,535,585	45,157,708	57,381,526	5,519.22	6,302.48	8,140.36
Total	204,959,946	293,747,536	310,910,738	71,170.67	110,385.68	74,578.28

Data on the Exports Classified by CN Chapter and Region of Destination (2006- 2008) can be found in Table B.2 under Annex 2.

## 2.2. Chemical Use by Categories

*Table 2.B.1: Imports of Chemical Products by Final Use (Broad Economic Classification) (Source: NSO, 2009)*

BEC	BEC Description	CIF Value €			Tons		
		2006	2007	2008	2006	2007	2008
0011	FOOD/BEVERAGES PRIMARY FOR INDUSTRY	20,380	5,913	10,513	2.27	0.61	1.89
0021	INDUSTRIAL SUPPLIES (NON-FOOD) PRIMARY	2,548,353	229,816	1,670,321	8,475.98	596.80	13,121.64
0022	INDUSTRIAL SUPPLIES (NON-FOOD) PROCESSED	188,091,854	244,087,106	237,282,489	88,820.80	95,105.38	105,726.95
0031	FUEL / LUBRICANTS PRIMARY	504,235	463,750	591,616	2,871.11	2,904.38	3,056.55
0033	FUEL / LUBRICANTS PROCESSED - OTHER	303,642,542	416,340,639	557,883,684	877,948.56	1,224,506.92	1,056,852.87
0062	CONSUMER GOODS NES SEMI-DURABLE	35,789,334	39,291,473	34,374,955	6,821.42	5,810.73	7,929.15
Total		654,863,632	816,467,787	967,634,482	1,000,723.65	1,344,940.08	1,207,250.57

*Table 2.B.2: Exports of Chemical Products by Final Use (Broad Economic Classification) (Source: NSO, 2009)*

BEC	BEC Description	FOB Value €			Tons		
		2006	2007	2008	2006	2007	2008
0021	INDUSTRIAL SUPPLIES (NON-FOOD) PRIMARY	0	5,821	17,424	0.00	0.10	0.18
0022	INDUSTRIAL SUPPLIES (NON-FOOD) PROCESSED	53,902,934	69,035,217	71,165,117	7,408.42	9,674.50	9,194.76
0031	FUEL / LUBRICANTS PRIMARY	3,296	501	24,872	22.00	0.23	0.07
0033	FUEL / LUBRICANTS PROCESSED - OTHER	29,854,915	51,792,757	43,496,034	61,178.29	97,669.63	60,271.11
0062	CONSUMER GOODS NES SEMI-DURABLE	13,400,261	14,248,513	23,085,456	1,147.08	1,212.71	2,580.01
0063	CONSUMER GOODS NES NON-DURABLE	107,798,540	158,664,727	173,121,835	1,414.89	1,828.51	2,532.15
Total		204,959,946	293,747,536	310,910,738	71,170.67	110,385.68	74,578.28

*Table 2.B.3: Chemical Use by Categories*

Type of Chemical	Number of Metric Tons Used per Year in the Country
Petroleum Products	1156975 <sup>11</sup>

### 2.3. Storage of Chemicals and Related Issues

*Table 2.C.1: Bulk Chemical Storage and Warehousing Facilities*

Chemical Type	Size/Capacity (Volume in metric tons)	Type of Facility <sup>12</sup>	Location Area (Port, Industrial Complex, Urban, Rural)
Petroleum Products	1000142 <sup>13</sup>	Various Types	Port, Industrial Complex

*Table 2.C.2: A Breakdown of the primary petroleum storage facilities (Source: MRA, 2009)*

Locality	Storage Capacity (tons)
Marsa Power Station	35,378
MOBC	50,835
Delimara Power Station	87,700
San Lucian Oil	50,000
Freeport Oil Tanking	531,550
B'Bugia	36,842
Has-Saptan	124,400
Ras Hanzir	49,000
Wied Dalam	14,210
Malta International Airport	987
<b>Total Primary Storage Capacity</b>	<b>1,000,142</b>

### 2.4. Transport of Chemicals and Related Issues

Since Malta is an island, most of the chemicals imported in Malta in bulk are usually imported through maritime facilities and then distributed by road towards their end destination. In actual fact, chemicals that are imported to Malta travel thousands of miles, sometimes by road as groupage cargo on trailers to Sicily, and then make the short crossing to Malta. A significant amount of transport takes place by air, some of which are very dangerous chemicals.

The majority of chemical products transported on the Maltese roads are petroleum products. ADT does not register the quantities of dangerous goods transported by road on the island. The European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) has provisions that prohibit the carriage of certain

<sup>11</sup> Figure in metric tones as at end 2008. Includes aviation fuel and bunker fuel, both may be considered as re-exports. Source: Enemalta Corporation Annual Report 2008. Source: Enemalta Corporation

<sup>12</sup> Indicate the type of storage facility, e.g. whether: open, partly covered, completely enclosed, bounded, and monitored for air and water emissions.

<sup>13</sup> Figure is in metric tons and includes petroleum products stored at the Power Stations, but excludes storages of small operators.

dangerous goods (e.g. Class 6 toxic substances) with other goods that can be contaminated or have an adverse reaction (e.g. food stuffs or explosive material).

*Table 2.D: Supply Chain for Bulk Chemical Distribution and Transportation*

Chemical Type	Type of Transportation Facility	Approximate Capacity (Volume in metric tons/annum)	Labelling; Health and Environment Protection Measures
<i>Petroleum Products</i> <sup>14</sup> - Liquid <i>Petroleum Gas (LPG)</i> <sup>15</sup>	Maritime	22366	Safety Data Sheets
<i>Petroleum Products - Fuels</i> <sup>16</sup>	Maritime	865728	Safety Data Sheets
<i>Consumer Chemicals</i> <sup>17</sup>	Road	Approx. 2000	ADR Regulations

## 2.5. Chemical Waste

*Table 2.E.: Non-hazardous Waste Disposal in Public Landfills*

	Municipal solid waste	Construction and demolition waste	Industrial and other waste
2004	217,546	38,092	34,124
2005	213,930	11,328	27,357
2006	218,200	4,503	24,553
2007	245,357	5,512	27,633
2008	257,743	8,916	20,883

<sup>14</sup> In 2008 the amount reached 1182762 metric tonnes. Monetary values are unknown. Figure includes aviation fuel and bunker fuel, both may be considered as re-exports. Source: Enemalta Corporation Annual Report 2008

<sup>15</sup> Source: Enemalta, 2009

<sup>16</sup> Source: Enemalta, 2009

<sup>17</sup> Source: Enemalta, 2009



## 2.6. Overview of Technical Facilities for Recycling of Chemicals

The household chemical waste, including bulk waste, is collected through five civic amenity sites.

The facility targeted for the treatment of non/hazardous waste generated from industry and commercial activities is still not in operation since the application for the Integrated Pollution Prevention and Control (IPPC) Permit is still pending. This facility has been redesigned by an updated inventory incorporating the current needs of the actual facility.

The civic amenity sites combined with the following two new deposit sites - Għammieri in Malta and the Gozo Farm - can be used for small quantities of pesticides and empty pesticide containers. In the case of large quantities of obsolete pesticides these must go through a waste acceptance procedure same as other waste being incinerated.

The following are WasteServ's facilities which are dealing with the management of chemical wastes.

*Table 2.F: Facilities for Recovery and Recycling of Chemicals and related Waste<sup>18</sup>*

Location of Facility, Operation or Process	Description of the Facility, Operation or Process	Recovery Operation (Annex IVB <sup>19</sup> ) R code	Capacity of the Facility (tons/year)	Does the Facility Treat Wastes Imported?
Marsa Temporary Storage Facility	This facility is permitted for the storage of various waste streams including some chemical waste streams. Wastes received at this facility are then directed for appropriate treatment and/or disposal. The waste has to go for incineration and therefore through the waste acceptance procedure as per IPPC.	R13	N/A	No
Civic Amenity Site - Magħtab	This facility is concerned with the collection of household hazardous wastes and small quantities of hazardous wastes from small commercial entities including waste solvents, pesticides, expired medicines, etc. Wastes received at this facility are then directed for appropriate treatment and/or disposal.	R13	10,492	No
Civic Amenity Site - Mrieħel	This facility is concerned with the collection of household hazardous wastes and small quantities of hazardous wastes from small commercial entities including waste solvents, pesticides, expired medicines, etc. Wastes received at this facility are then directed for appropriate treatment and/or disposal.	R13	12,847	No
Civic Amenity Site - Ħal Far	This facility is concerned with the collection of household hazardous wastes and small quantities of hazardous wastes from small commercial entities including waste solvents, pesticides, expired medicines, etc. Wastes received at this facility are then directed for appropriate treatment and/or disposal.	R13	5,405	No
Civic Amenity Site - Luqa	This facility is concerned with the collection of household hazardous wastes and small quantities of hazardous wastes from small commercial entities including waste solvents, pesticides, expired medicines, etc. Wastes received at this facility are then directed for appropriate treatment and/or disposal.	R13	8,514	No

<sup>18</sup> Edible Oils and Waste Oils for recovery of oils are currently not permitted (MEPA, 2009)  
<sup>19</sup> Annex IVB of the Basel Convention are used

Location of Facility, Operation or Process	Description of the Facility, Operation or Process	Recovery Operation (Annex IVB <sup>19</sup> ) R code	Capacity of the Facility (tons/year)	Does the Facility Treat Wastes Imported?
Civic Amenity Site - Tal-Kus L/O Xewkija, Gozo	This facility is concerned with the collection of household hazardous wastes and small quantities of hazardous wastes from small commercial entities including waste solvents, pesticides, expired medicines, etc. Wastes received at this facility are then directed for appropriate treatment and/or disposal.	R13	3,939	No
IMA Engineering Ltd. - Marsascalea	This facility collects hazardous wastes, possibly for treatment and export. This facility is not yet in operation since the Integrated Pollution Prevention and Control (IPPC) Permit is still in the draft stage.	R13	4710 (=Maximum storage capacity)	No

Further to the above WasteServ is currently in the process of designing a storage and treatment facility for the receipt, storage and treatment of various types of hazardous wastes including waste chemicals.

## 2.7. Overview of Capacity for Disposal of Chemicals

One of the most important facilities is the one located in Marsa. Originally this facility was used to treat the waste from the abattoirs however recently the facility has been modified to accept clinical waste, including solvents and other solid waste. Sludges from pharmaceutical industries and expired pharmaceuticals are also treated within this facility.

*Table 2.G: Facilities for Disposal of Chemicals and related Waste*

Location of Facility, Operation or Process	Description of the Facility, Operation or Process	Disposal Operation (Annex IVA <sup>20</sup> ) D code	Capacity of the Facility (in metric tons)	Does the Facility Treat Wastes Imported?
Marsa Thermal Treatment Facility	This facility is mainly concerned with the thermal treatment of animal waste, clinical waste and hazardous wastes namely wastes from industry including waste chemicals.	D10	12,900 tonnes per annum	No

Further to the above WasteServ has built a hazardous waste landfill having a capacity of some 100,000 cubic metres. This facility is not yet in operation since the application for the IPPC Permit is still pending.

<sup>20</sup> Annex IV A of the Basel Convention

## 2.8. Chemical Specific Data Requirement

*Table 2.H.A: Obsolete Chemical Stocks*

Location	Main Content by Chemical or Groups of Chemicals/Waste	Magnitude of the Stocks
Malta Shipyards	Polychlorinated biphenyls and polychlorinated terphenyls	46,000 litres

WasteServ has very limited information on such obsolete stocks and sites.

*Table 2.H.B: Contaminated Areas (MEPA, 2009)*

Location	Main Content by Chemical or Groups of Chemicals/Waste	Site Description
31 <sup>st</sup> March Installation - Birżebbugia	Hydrocarbons	The site encompasses the tank farm having 9 storage tanks. The fuel stored is Gasoline, Diesel and Jet A-1. The facility is linked to Wied Dalam Installation by two Jet-A1 pipelines which run underground in B'Bugia and surface in the valley up to Wied Dalam. Site is contaminated after historic fuel spills and failure of a tank bottom. Remediation measures (by way of pumping up of fuel through core holes dug up for this purpose) had been ongoing for a number of years but during last Seveso Inspection (2008) it was stated that fuel was not being pumped out any more. Information regarding the state of the site at present is unknown.
Wied Dalam Installation - Birżebbugia	Hydrocarbons	There are 12 Steel Tanks built in the 1950s. These horizontal, cylindrical steel plated tanks, mounted on concrete plinths are located in 7 chambers (accessible caverns excavated in rock). This site has historic contamination with the last recorded accident happening in August 2008 where a fuel tank was overfilled with Kerosene. It was reported, that right after the incident, fuel was seen percolating through the cavern roof and cascading like a shower into the cavern. It was also reported that this fuel could not be recovered since it had either evaporated or percolated. Another issue related to this site is the storage of the sludge resulting from the cleaning of drums. The sludge is stored in metal drums. Drums deteriorate over time however may be replaced. Drums accumulate as the sludge cannot be disposed of at <i>Magħtab</i> any longer. There is also a pit on site. This pit also contains this sludge material which is being treated and dried. A tender for the disposal of all this sludge was issued on 30 <sup>th</sup> October 2009 and will close in December 2009.

Location	Main Content by Chemical or Groups of Chemicals/Waste	Site Description
Marsa Power Station - Marsa	Hydrocarbons	Total generation capacity of this station stands at 267MW. All the steam units presently burn 1% sulphur fuel oil and the gas turbine burns distillate fuel oil. The contamination related to this site came to be known in January 2008 when it was reported that oil was emanating to sea at <i>Menqa</i> Marsa. Upon investigation it transpired that during refurbishment works to the Marsa Regatta Club Slipway, when the concrete walls on the sides of the old slipway were removed, oil started to seep to the sea. Since Enemalta had a disused product pipeline along the Wharf they were informed about this spill. Enemalta re-concreted the slipway to stop oil going into the sea and patched up the road to restore it to the original state. They were requested to assess the extent of the oil contamination by digging up core samples. Core samples were in fact dug up in June 2008 and all cores proved that oil was in fact present at which point Enemalta were requested to perform further core samples since with the number undertaken the real extent was not verified. To date no further core samples have been taken.
Mediterranean Offshore Bunkering Co. Ltd. (MOBC) - Marsa	Hydrocarbons	Spills of Fuel Oil related to overfilling of tanks and mismanagement of their Separators. Two Stop orders were issued in the past by the MEPA Inspectorate relating to these issues.
Manoel Island - Gżira	Hydrocarbons	Underground Fuel Storage tanks dating back to the English Rule. At one point these tanks were utilized by Waste Oils Co Ltd. Condition of these tanks is unknown.
San Ġwann Site	Hydrocarbons	Underground Silos are present in San Ġwann; these were utilized as Grain storage terminals. It was indicated that at one point these silos were utilized to store oils. This usage was stopped short when it became evident that these same silos were leaking and in fact all the oils that had been deposited was in fact lost. At present this site is managed by the Local Council. Other such storage sites exist in other parts of the island such as <i>Mistra</i> and <i>Buskett</i> . The present usage, if any, of these silos is unknown.
Ras Hanzir	Hydrocarbons	These are both Enemalta storage terminals for Fuel Storage. There are reports of relatively minor spillages over the years. At Ras Hanzir, 7,000 MT of waste oil is stored in Tank No 24. A tender for the disposal of this oil was issued on 30 <sup>th</sup> October 2009 and will close in December 2009.
Has Saptan	Hydrocarbons	
Port Area - Corradino	General Contamination	This area extends from Dock Yard to China Dock (Dock No 6). Activities in this area need to be selectively screened to identify potential polluters.
Asbestos Store at Corradino - Paola	Asbestos	This site is mainly used by Enemalta. A tender document is currently being drawn up and the tender will soon be issued to remove all the asbestos stored at Corradino Paola.

Location	Main Content by Chemical or Groups of Chemicals/Waste	Site Description
Asbestos store on the outskirts of the Airport runway - Luqa	Asbestos	This site is managed by Airmalta.
Bengħisa Area - Birżebbugia	Coal Ash	During the period that Malta was utilizing Coal as a Fuel, Coal Ash was dumped by Enemalta into this area. Enemalta might be asked to plot this site and submit more information regarding quantities dumped.
Ta' Belula near Għar Lapsi - Siġġiewi	Fly Ash	This area has been used for storage of Fly ash. This material is improperly stored and is subject to weathering. Presently Fly Ash is being stored in Jumbo Bags at Marsa Power Station.

## 2.9. Unintentionally Generated Chemicals

One example of a dangerous family of chemicals is persistent organic pollutants (POPs), which are chemical substances (such as dioxins, PCBs and DDT) that persist in the environment, bioaccumulate in food webs and thus pose a risk to human health and the environment. POPs also require Prior Informed Consent. A 2004 study indicates that Malta's dioxin emissions at 9 g I-TEQs per million inhabitants are below European averages, which range between 10 and 30 g I-TEQs per million inhabitants. In 2004 the Community ratified a UNECE agreement and joined a second global convention to eliminate pollution by POPs by banning the use of harmful chemicals (Table 2.J) including PCBs.<sup>21</sup>

*Table 2.I: List of Substances subject to Prohibitions according to the POPs Regulation*

Substance	CAS No	EC No	Specific Exemption on Intermediate Use or Other Specification
Aldrin	309-00-2	206-215-8	-
Chlordane	57-74-9	200-349-0	-
Dieldrin	60-57-1	200-484-5	-
Endrin	20-72-8	200-775-7	-
Heptachlor	76-44-8	200-962-3	-
Hexachlorobenzene	118-74-1	200-273-9	-
Mirex	2385-85-5	219-196-6	-
Toxaphene	8001-35-2	232-283-3	-
Polychlorinated Biphenyls (PCB)	1336-36-3 and others	215-648-1 and others	Without prejudice to Directive 96/59/EC, articles already in use at the time of entry into force of Regulation (EC) No 850/2004 on persistent organic pollutants are allowed to be used.

<sup>21</sup> Extract from the State of the Environment Report (2007) published by MEPA

Substance	CAS No	EC No	Specific Exemption on Intermediate Use or Other Specification
DDT (1,1,1-trichloro-2,2-bis(4-chlorophenyl) ethane)	50-29-3	200-024-3	The existing production and use of DDT as a closed system site-limited intermediate for the production of dicofol is allowed until 1 January 2014, in accordance with Article 4(3) of Regulation (EC) No 850/2004 on persistent organic pollutants.
Chlordecone	143-50-0	205-601-3	-
Hexabromobiphenyl	36355-01-8	252-994-2	-
HCH, including lindane	608-73-1, 58-89-9	210-168-9, 200-401-2	-

*Table 2.J: Unintentionally Generated Persistent Organic Pollutants under the Stockholm Convention<sup>22</sup>*

Type of Facility/Practices		Number of Facilities
Convention Annex C. Part II: Source Categories	(a) Waste incinerators, including co-incinerators of municipal, hazardous, or medical waste or of sewage sludge	1
Convention Annex C. Part III: Source Categories	(a) Fossil fuel-fired utility and industrial boilers <sup>23</sup>	
	(b) Firing installations for wood and other biomass fuels	No data
	(c) Specific chemical production processes releasing unintentionally formed persistent organic pollutants, especially production of chlorophenols and chloranil <sup>24</sup>	
	(d) Motor vehicles, particularly those burning leaded gasoline <sup>25</sup>	
	Destruction of animal carcasses	1
	(e) Smouldering of copper cables <sup>26</sup>	
	(f) Waste oil refineries <sup>27</sup>	
<b>TOTAL</b>		<b>2</b>

<sup>22</sup> Taken from the UNITAR Complementary Guidance Note, Preparing/Updating a National Profile as Part of a Stockholm Convention National Implementation Plan.

<sup>23</sup> Fuels used are unknown

<sup>24</sup> POPs are not produced in Malta

<sup>25</sup> Leaded gasoline was replaced by Lead Replacement Petrol

<sup>26</sup> Illegal activity

<sup>27</sup> Only one company is present in Malta, however it blends oil, thus it is not considered as a refinery

### 3. Priority Concerns Related to Chemicals at All Stages in Their Life Cycle

#### 3.1. Priority Concerns Related to Chemicals at all Stages of Their Life Cycle

*Table 3.A: Description of Problem Areas*

Nature of Problem	Brief Description of Problem	Chemical(s)/ Pollutant(s)
Groundwater Pollution	Increase in the levels of certain chemical parameters due to anthropogenic activities	Nitrates, Chlorides Sodium. Other potential pollutants could arise from the activities described in text.
VOCs - poorly controlled use of certain solvents by SMEs, eg car refinishers.	Many SMEs are exploiting a loophole in EC and national legislation, where spray paints containing VOCs are still allowed for certain specific uses. These paints are sometimes diverted to other uses.	VOCs
Waste oils	Lack of proper facilities, eg controlled incineration or fractional distillation, for safely disposing of waste oils resulting from servicing of ships, sludge generated after cleaning of petroleum tanks, and spent car oil collected from service stations.	Waste oils
Fly ash	Limited facilities for safe disposal of fly ash and electrostatic precipitator ash from power stations.	Ash containing heavy metals.
National permitting system still work in progress	The national environmental permitting system is still incomplete. A number of enterprises handling hazardous substances are still essentially unregulated.	Various. Priority to be given to SVHCs and pesticides.
Lack of local hazardous waste treatment facilities	There is a problem related to the treatment cytotoxic drugs	Cytotoxic Drugs



*Table 3.B: Priority Concerns Related to Chemicals*

Nature of Problem	Level of Concern	Ability to Control Problem	Availability of Statistical Data	Specific Chemicals Creating Concerns
Drinking Water Contamination	Low	High	Sufficient	None
Ground-water Pollution	High	Low	Insufficient	<ul style="list-style-type: none"> <li>• Fertilisers</li> <li>• Pesticides</li> <li>• Fuels</li> <li>• Emerging Substances, especially from the Pharmaceutical manufacturing industry</li> <li>• Substances used by industries such as shipyards</li> <li>• Substances leached at end of use facilities and waste disposal sites</li> <li>• Heavy metals from electroplating</li> <li>• Chemical wastes from laboratories and industry</li> </ul>
Medical waste Treatment/ Disposal	High	Medium	Insufficient	Cytotoxic Drugs
Chemical Residues in Food	Medium	Medium	Insufficient	Pesticides
Chemical Contamination of Goods (Excl. Food)	Low	Medium	Insufficient	Dangerous chemicals
Occupational Health: Agriculture	High	Low	No data	Hazardous Chemical Agents
Occupational Health: SMEs	High	Low	No data	Hazardous Chemical Agents
Occupational Health: Industrial	High	Low	No data	Hazardous Chemical Agents
Household Chemicals	High	Medium	Sufficient	<i>General</i>
Labelling of Chemicals	High	Medium	Sufficient	<i>General</i>

Nature of Problem	Level of Concern	Ability to Control Problem	Availability of Statistical Data	Specific Chemicals Creating Concerns
Chemical Accidents: Industrial (non COMAH)	High	Low	No data	<i>General</i>
Chemical Accidents: Industrial (COMAH)	High	Medium	Sufficient	<i>General</i>
Chemical Accidents: Transport	Low	No data available	Only generic data available	Dangerous Substances
Transport of Chemicals	Medium	Medium	Insufficient	Dangerous Substances
Chemical Poisoning: Intentional	High	Medium	Insufficient	Household chemicals
Chemical Poisoning: Non-intentional	High	Medium	Insufficient	Paints, Varnishes, Solvents, etc.
Other Specific Chemicals of Concern	Medium	High	Sufficient	Restricted Substance & Substances of very high concern established by REACH Regulations

### 3.2. Assessment and Comments

Legislation on waste, air quality, groundwater pollution, IPPC and marine discharges are considered as high priorities. Legislation on specific chemicals is classified as medium or low priority, as these issues can be addressed by General Binding Rules or permitting if required on the basis of a risk-based approach.

#### 3.2.1. Groundwater Pollution

The problem is of a National Scale as the groundwater bodies extend beneath the whole of the islands. As groundwater is used as a source of water for human consumption and in agricultural practices (irrigation and animal husbandry), there is a high level of concern about this problem and therefore a high priority ranking.

Storage sites of liquid chemicals (such as fuels) and wastes are of major concern as these provide a potential risk of point source pollution. Data availability on these sites varies and is diffused amongst a number of entities. An inventory of the availability of this data is highly recommended.

Fertilisers and pesticides are potential sources of diffuse pollution, through their application in arable agriculture. Data availability on the type and quantities of substances used is very limited. Another potential diffuse source of pollution is the spreading of sludges (if any). Data availability in this sector is very limited.

The transfer of chemicals from one site to another also creates groundwater pollution potential. Better information sharing is required in cases of chemical accidents so that prompt action can be taken to limit any deleterious effect on groundwater.

### *3.2.2. Disposal of Cytotoxic Drugs*

Wastes are stored in the appropriate UN-type containers for cytotoxic wastes. The pharmacy department, at MDH, is the site where these containers are temporarily stored. When full, bins are sealed, numbered with a permanent marker, on the appropriate space allocated on the bin itself and stored in the appropriate temporary store at the respective chemotherapy units. Once these storage areas are full, these bins are then transferred to the permanent storage area at Mount Carmel Hospital (MCH) accompanied by pharmacy staff. Prior to transfer of the bins to Mount Carmel Hospital, the pharmacist visually inspects each and every bin to ensure that bins are sealed, numbered, signed appropriately, and recorded.

All equipment utilised for chemotherapy reconstitution in direct contact with the cytotoxic drugs are discarded in the appropriate cytotoxic bins. Cytotoxic bins are supplied to the wards from the pharmacy department. There is an existing protocol issued to a ward not usually having cytotoxic waste. Bins supplied to the wards are pre-numbered and registered for accountability. Usually only one bin is supplied per ward - and a second bin is supplied upon presentation of a full, sealed bin. However, there are some exceptions.

Protective clothing and disposable items should be treated as hazardous and disposed of in yellow bags for incineration. Heavily contaminated items may need to be incinerated. The sealed bins contain ancillary wastes (ward wastes), expired cytotoxic drugs without outer package or in-use wastes from the Chemotherapy unit including chemotherapy gloves being utilised. In case of doubt, a “worst case scenario” is assumed and waste is disposed in the higher risk receptacle. It must always be stored in the disposal room before transferring down to the designated collection points outside Pharmacy.

#### 4. Legal Instruments and Non-Regulatory Mechanisms for Life Cycle Management of Chemicals

##### 4.1. Overview of National Legal Instruments Which Address the Life Cycle Management of Chemicals

*Table 4.A: References to Existing Legal Instruments Which Address the Life Cycle Management of Chemicals*

Legislation	Responsible Ministry & Authority / Department / Company	Chemicals Covered	Objectives & Scope
<p>L.N. 214/2009 - PSA - Classification, Labelling and Packaging of Substances and Mixtures (CLP) (Implementation) Regulations, 2009</p> <p><i>LN 214/200 will repeal the following in 2015:</i></p> <p><i>L.N. 306/2008 - PSA - The Dangerous Substances Regulations, 2008 (as amended)</i></p> <p><i>L.N. 10/2007 - PSA - Dangerous Substances and Preparations Regulations, 2007 (as amended)</i></p>	<p>MFEI - MSA</p>	<p>Dangerous Substances and Mixtures</p>	<p>These regulations ensure a high level of protection of human health and the environment as well as the free movement of substances, mixtures and articles by: harmonising the criteria for classification of substances and mixtures, and the rules on labelling and packaging for hazardous substances and mixtures; providing an obligation for manufacturers and importers of substances to notify the Agency of such classifications and label elements; establishing a list of substances with their harmonized classifications and labelling elements at Community level; establishing a classification and labelling inventory of substances, which is made up of all notifications, submissions and harmonised classifications and labelling elements.</p>

Legislation	Responsible Ministry & Authority / Department / Company	Chemicals Covered	Objectives & Scope
L.N. 54 of 2009 - Environment Protection Act (Act No. XX of 2001) Control of Volatile Organic Compound- VOC Emissions (Storage and Distribution of Petrol from Terminals to Service Stations) Regulations, 2009 & repealing LN 214 of 2001 (as amended)	OPM - MEPA	VOCs	These regulations transpose Directive 94/63/EC on the control of volatile organic compound (VOC) emissions resulting from the storage of petrol and its distribution from terminals to service stations. These regulations apply to the operations, installations, vehicles and vessels used for storage, loading and transport of petrol from one terminal to another or from a terminal to a service station.
L.N. 48 of 2009 - Waste Management (Supervision and Control of Shipments of Radioactive Waste and Spent Fuel) Regulations, 2009	OPM - MEPA	Waste	These regulations bring into effect the provisions of Council Directive 2006/117/EURATOM of 20 November 2006 on the supervision and control of shipments of radioactive waste and spent fuel and Commission Decision 2008/312/EURATOM of 5 March 2008 establishing the standard document for the supervision and control of shipments of radioactive waste and spent fuel referred to in Council Directive 2006/117/EURATOM. These regulations provide additional measures, procedures and guidance to those mentioned in the Nuclear Safety and Radiation Protection Regulations, 2003.
L.N. 22 of 2009 - Environment Protection Act (Cap. 435) Occupational Health and Safety Authority Act (Cap. 424) - Waste Management (Management of Waste from Extractive Industries and Backfilling) Regulations, 2009	OPM - MEPA	Waste	These regulations provide for measures, procedures and guidance to prevent or reduce as far as possible any adverse effects on the environment, in particular water, air, soil, fauna and flora and landscape, and any resultant risks to human health, brought about as a result of the management of waste from the extractive industries or of the backfilling into excavation voids. These regulations provide additional measures, procedures and guidance to those in the Waste Management (Permit and Control) Regulations, 2001.

Legislation	Responsible Ministry & Authority / Department / Company	Chemicals Covered	Objectives & Scope
LN 14/2009 - PCA - Maximum Residue Levels of Pesticides in Produce of Plant and Animal Origin (Implementation of EC Regulation) Regulations, 2009	MFEI - MSA	Pesticides	This Legal Notice implements EC Regulation 396/2005 which regulates pesticide residues which may be present on fresh, processed and/or composite food or feed. The Regulation also includes a list of permissible maximum residue levels on produce of plant and animal origin which are placed on the market.
LN 249/2008 - Liquid Petroleum Gas Market Regulations, 2008	MRRA - MRA	Petroleum Products	The scope of these regulations is to regulate the Liquefied Petroleum Gas Market in Malta.
<p>L.N. 207/2008 - PSA - Registration, Evaluation, Authorisation and Restriction of Chemicals Enforcement (E-REACH) Committee Regulations, 2008</p> <p><i>L.N. 90/2009 - PSA - Commencement Notice of the Registration, Evaluation, Authorisation and Restriction of Chemicals Enforcement (E-REACH) Committee Regulations, 2009</i></p>	MFEI - MSA	Chemical Substances, Mixtures and Articles containing chemicals	The E-REACH Committee was set up to assist the MSA with the aim to achieve a holistic multi-partite approach for the implementation and management of the enforcement of REACH.

Legislation	Responsible Ministry & Authority / Department / Company	Chemicals Covered	Objectives & Scope
L.N. 61/2008 - PSA - Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (Implementation) Regulations, 2008	MFEI - MSA	Chemical Substances, Mixtures and Articles containing chemicals	<p>REACH is the Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals. The main aims of REACH are to ensure a high level of protection of human health and the environment from the risks that can be posed by chemicals, the promotion of alternative test methods, the free circulation of substances on the internal market and enhancing competitiveness and innovation.</p> <p>REACH makes industry responsible for assessing and managing the risks posed by chemicals and providing appropriate safety information to their users. In parallel, the European Union can take additional measures on highly dangerous substances, where there is a need for complementing action at EU level.</p>
LN 44/2008 - Quality of Fuels Regulations, 2008	MRRA - MRA	Petroleum Products	The scope of these regulations is to regulate the quality of fuels available in Malta and to transpose Directive 93/12/EEC, Directive 1999/32/EC, Directive 2005/33/EC, Directive 98/70/EC and Directive 2003/17/EC.
L.N. 17/2008 - PSA - The Fertilisers (Implementation) Regulations, 2008	MFEI - MSA	EC Fertilisers	It applies to products which are placed on the market as fertilisers designated 'EC fertiliser'.
L.N. 363/2007 - PSA - The Detergents (Implementation) Regulations, 2007	MFEI - MSA	Detergents	It establishes rules designed to achieve the free movement of detergents and surfactants for detergents in the internal market while, at the same time, ensuring a high degree of protection of the environment and human health. For this purpose, this regulation harmonises the following rules for the placing on the market of detergents and of surfactants for detergents: the biodegradability of surfactants in detergents; restrictions or bans on surfactants on grounds of biodegradability; the additional labelling of detergents, including fragrance allergens; and the information that manufacturers must hold at the disposal of the MSA.

Legislation	Responsible Ministry & Authority / Department / Company	Chemicals Covered	Objectives & Scope
L.N. 353/2007 - Protection of the Health and Safety of Workers from the Risks related to Chemical Agents at Work (Amendment) Regulations, 2007	MSOC - OHSa	Dangerous Chemicals	Protection of the health and safety of workers from the risks related to chemical agents at work by establishing an updated list of occupational exposure limit values
L.N. 311/2007 - PSA - Batteries and Accumulators Regulations, 2007	MFEI - MSA	Batteries and accumulators	These regulations apply to all types of batteries and accumulators, regardless of their shape, volume, weight, material composition or use. These regulations harmonise the requirements concerning the heavy metal content and labelling of batteries and accumulators and ensures the smooth functioning of the internal market and avoid distortion of competition within the Community.
L.N. 292 of 2007 - Environment Protection Act (CAP. 435) Arsenic, Cadmium, Mercury, Nickel and Polycyclic Aromatic Hydrocarbons in Ambient Air Regulations, 2007	OPM - MEPA	Arsenic, Cadmium, Mercury, Nickel and Polycyclic Aromatic Hydrocarbons	The objectives of these regulations are to: a) establish a target value for the concentration of arsenic, cadmium, nickel and benzo(a)pyrene in ambient air so as to avoid, prevent or reduce harmful effects of arsenic, cadmium, nickel and polycyclic aromatic hydrocarbons on human health and the environment as a whole; b) ensure, with respect to arsenic, cadmium, nickel and polycyclic aromatic hydrocarbons, that ambient air quality is maintained where it is good and that it is improved in other cases; c) determine common methods and criteria for the assessment of concentrations of arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons in ambient air as well as of the deposition of arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons; d) ensure that adequate information on concentrations of arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons in ambient air as well as on the deposition of arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons is obtained and ensure that it is made available to the public.



Legislation	Responsible Ministry & Authority / Department / Company	Chemicals Covered	Objectives & Scope
LN 278/2007 - Petroleum for the Inland (Wholesale) Fuel Market Regulations, 2007	MARRA - MRA	Petroleum Products	The scope of these regulations is to regulate the inland wholesale fuel market of petroleum.
L.N. 152 of 2007 - Environment Protection Act (CAP. 345) - The European Pollutant Release and Transfer Register Reporting Obligations Regulations, 2007	OPM - MEPA	Pollutants	The scope of these regulations is to establish reporting templates, to fulfil the obligations of Article 7(1) of the EC Regulations regarding the establishment of timeframes for reporting of releases and offsite transfers by industry to the Competent Authority, and to fulfil the obligations of Article 20 of the EC Regulations, regarding penalties applicable to infringements of the provisions of the EC Regulations.
L.N. 145 of 2007 - Environment Protection Act (CAP. 345) - Substances Depleting the Ozone Layer Regulations, 2007	OPM - MEPA	Ozone Depleting Substances	These regulations contain provisions for the application of Regulation (EC) No. 2037/2000, as amended, on substances that deplete the ozone layer.
L.N. 106 of 2007 - Environment Protection Act (CAP. 345) -Waste Management (Activity Registration) Regulations, 2007	OPM - MEPA	Waste	These regulations provide additional measures, procedures and guidance to those in the Waste Management (Permit and Control) Regulations, 2001.
L.N. 63 of 2007 - Environment Protection Act (CAP. 345) - Waste Management (Electrical and Electronic Equipment) Regulations, 2007	OPM - MEPA	Waste	The purpose of these regulations, as a first priority, the prevention of waste electrical and electronic equipment (WEEE), and in addition, the reuse, recycling and other forms of recovery of such wastes so as to reduce the disposal of waste. It also seeks to improve the environmental performance of all operators involved in the life cycle of electrical and electronic equipment, such as producers, distributors and consumers, and in particular those operators directly involved in the treatment of waste electrical and electronic equipment. These regulations provide additional measures, procedures and guidance to those in the Waste Management (Permit and Control) Regulations, 2001.

Legislation	Responsible Ministry & Authority / Department / Company	Chemicals Covered	Objectives & Scope
L.N. 323/2006 - Protection of Workers from the Risks related to Exposure to Asbestos at Work Regulations, 2006	MSOC - OHSa	Asbestos	Protection of Workers against risks to their health, including the prevention of such risks, arising or likely to arise from exposure to asbestos at work. These regulations lay down limit values and other specific requirements
L.N. 277 of 2006 - Waste Management (Packaging and Packaging Waste) Regulations, 2006	OPM - MEPA	Waste	These regulations provide additional measures, procedures and guidance to those in the Waste Management (Permit and Control) Regulations, 2001, which aim, as a first priority, at preventing the production of packaging waste and, as additional fundamental principles, at reusing packaging, at recycling and other forms of recovering packaging waste and, hence, at reducing the final disposal of such waste.
L.N. 78 of 2006 - Environment Protection Act (CAP. 435) - Product Safety Act (CAP. 427) - Limitation of Emission of Volatile Organic Compounds (Paints, Varnishes and Vehicle Refinishing Products) Regulations, 2006	OPM - MEPA	VOCs	The purpose of these regulations is to limit the total content of VOCs in certain paints and varnishes and vehicle refinishing products in order to prevent or reduce air pollution resulting from the contribution of VOCs to the formation of tropospheric ozone.
LN 528/2004 - Use of Biofuels or Other Renewable Fuels for Transport Regulations, 2004	MARRA - MRA	Biofuels	These regulations give effect to Directive 2003/30/EC of the European Parliament and of the Council of 8 May 2003 on the promotion of the use of biofuels or other renewable fuels for transport.
LN 432/2004 - Natural Gas (Marketing) Regulations, 2004 (as amended)	MARRA - MRA	Natural Gas	These regulations establish rules relating to the organisation and functioning of the natural gas sector. These regulations give effect to Directive 2003/55/EC of the European Parliament and of the Council of the 26th June, 2003 concerning common rules for the internal market in natural gas and repealing Directive 98/30/EC.

Legislation	Responsible Ministry & Authority / Department / Company	Chemicals Covered	Objectives & Scope
L.N. 424/2004 - PSA - Cosmetic Products Regulations, 2004 (as amended)	MFEI - MSA	Cosmetics	These regulations ensure the free circulation of cosmetic products in the internal market and the safety of cosmetic products placed on it.
L.N 294/2004 - PCA - Biocides Regulations, 2004 (as amended)	MFEI - MSA; MRRRA	Biocides	These regulations concern the authorisation and the placing on the market for use of biocidal products; the mutual recognition of authorisations and the establishment of a positive list of active substances which may be used in biocidal products.
LN 163/2004 - Reduction in the Sulphur Content of Certain Liquid Fuels (Amendment) Regulations, 2004	OPM - MEPA	Petroleum Products	Reduction in the Sulphur Content of Certain Liquid Fuels (Amendment)
L.N. 115/2004 - PCA - Plant Protection Products Regulations, 2004 and subsequent amendments.	MFEI - MSA	Plant Protection Products	Plant Protection Products placed on the market are regulated by this Legal Notice. The latter includes a Schedule with a positive list of active substance for plant protection products. The Regulations control: <ul style="list-style-type: none"> <li>- Procedure for the authorizations and revocations of Active Substances and of Plant Protection Products</li> <li>- Obligations of the holders of the authorizations.</li> <li>- Regulation of Professional Users and High Risk Plant Protection Products.</li> <li>- Regulation of Dealers of Plant Protection Products.</li> <li>- Labelling and Packaging of Plant Protection Products.</li> <li>- Research and Development of Active Substances and Plant Protection Products.</li> </ul>
L.N. 99 of 2004 - Environment Protection Act (CAP. 435) Waste management (End of Life Vehicles) Regulations, 2004	OPM - MEPA	Waste	These regulations provide additional measures, procedures and guidance to those in the Waste Management (Permit and Control) Regulations, 2001, which aim, as a first priority, at the prevention of waste from vehicles and, in addition, at the reuse, recycling and other forms of recovery of end of life vehicles and their components so as to reduce the disposal of waste.

Legislation	Responsible Ministry & Authority / Department / Company	Chemicals Covered	Objectives & Scope
L.N. 41/2004 - Work Place (Minimum Requirements for Work) (Confined Spaces and Spaces having Explosive Atmospheres) Regulations, 2004	MSOC - OHSA	Explosives	Regulations 18 to 23 and Annex II to IV establish minimum requirements for the occupational health and safety protection of workers working in confined spaces and, or in spaces having explosive atmospheres.
L.N. 227/2003 - Protection of the Health and Safety of Workers from the Risks related to Chemical Agents at Work Regulations, 2003	MSOC - OHSA	Dangerous Chemicals	Protection of workers from risks to their health and safety arising, or likely to arise, from the effects of chemical agents that are present at the workplace or as a result of any work activity involving chemical agents.
LN 211 of 2003 <sup>28</sup> - Motor vehicles (Carriage of dangerous goods by road) Regulations, 2003 (as amended)	MITC - ADT	Dangerous Chemicals	Regulation of local transport of dangerous goods by road
L.N. 122/2003 - Regulations on the protection of workers from the risks related to exposure to carcinogens or mutagens at work, 2003	MSOC - OHSA	Dangerous Chemicals	Protection of workers against risks to their health and safety, including the prevention of such risks, arising or likely to arise from exposure to carcinogens or mutagens at work, and lay down minimum requirements in this area, including limit values.
L.N. 37/2003 - Control of Major Accident Hazards Regulations, 2003 (as amended)	MSOC - OHSA	Dangerous Chemicals	Prevention of major accidents that involve dangerous substances, and the limitation of their consequences for humans and the environment, with a view to ensuring high levels of protection

<sup>28</sup> LN 211 of 2003 is a transposition of Directive 94/55/EC which was eventually repealed by Directive 2008/68/EC. Parts of Directive 2008/68/EC do not apply to Malta (Transport of dangerous goods by rail or inland waterway) and the Commission has been informed regarding the matter. All these regulations refer to Annexes A and B to the ADR (commonly known as 'the orange books') which are UN regulations adopted by the EU on the transport of dangerous goods by road. There are no new laws in the pipeline although the ADT would like to eventually revise the penalty system regarding ADR. This is still at a basic stage. The ADT would also like to set up an inspection system for 'existing tankers' as defined in LN 211 of 2003.

Legislation	Responsible Ministry & Authority / Department / Company	Chemicals Covered	Objectives & Scope
L.N. 11 of 2003 - Environment Protection Act (Act No. XX of 2001) Ozone in Ambient Air Regulations, 2003	OPM - MEPA	Ozone	The purpose of these regulations is: (a) to establish long-term objectives, target values, an alert threshold and an information threshold for concentrations of ozone in ambient air in Malta, designed to avoid, prevent or reduce harmful effects on human health and the environment as a whole; (b) to ensure that common methods and criteria are used to assess concentrations of ozone and, as appropriate, ozone precursors (oxides of nitrogen and volatile organic compounds) in ambient air in the Agreement States; (c) to ensure that adequate information is obtained on ambient levels of ozone and that it is available to the public; (d) to ensure that, with respect to ozone, ambient air quality is maintained where it is good, and improved in other cases; (e) to promote increased cooperation between Agreement States, in reducing ozone levels, use of the potential of transboundary measures and agreement on such measures.
L.N. 329 of 2002 - Environment Protection Act (Act No. XX of 2001) Limitations of Emissions of Certain Pollutants into the Air from Large Combustion Plants Regulations, 2002	OPM - MEPA	Combustion pollutants	These regulations apply to combustion plants designed for the production of energy with the exception of those which make direct use of products of combustion in manufacturing processes.
L.N. 327 of 2002 - Environment Protection Act (Act No. XX of 2001) Export and Imports of Certain Dangerous Chemicals Regulations, 2002	OPM - MEPA	Dangerous chemicals	These regulations provide for the establishment of a system of notification and information for imports from and exports to third countries of certain chemicals which are banned or severely restricted on the account of their effects on human health and the environment and to apply the international notification and 'prior informed consent' (PIC) procedure applied by the United Nations environment Programme (UNEP) and the Food and Agriculture Organisation (FAO).

Legislation	Responsible Ministry & Authority / Department / Company	Chemicals Covered	Objectives & Scope
L.N. 291 of 2002 - Environment Protection Act (Act No. XX of 2001) National Emission Ceilings for Certain Atmospheric Pollutants Regulations, 2002 (as amended)	OPM - MEPA	Air pollutants	The objective of these regulations is to: (a) limit emissions of acidifying and eutrophying pollutants and ozone precursors in order to improve the protection in Malta of human and environmental health; (b) to cover emissions in Malta all sources of the pollutants referred to in this legal notice.
LN 237/2002 - Crude Oil and Petroleum Products (Minimum Security Stocks and Crisis Management) Regulations, 2002 (as amended)	MARRA - MRA	Petroleum Products	These regulations are aimed at the maintenance of minimum security stocks of crude oil and petroleum products and at providing the competent authority with the necessary powers to manage such stocks in the event of difficulties arising in the supply of crude oil and petroleum products which might appreciably reduce the supply of these products and cause severe disruption.
L.N. 234 of 2002 - Environment Protection Act (Act No. XX of 2001) Integrated Pollution Prevention and Control Regulations, 2002	OPM - MEPA	IPPC	The objective of these regulations is to achieve integrated prevention and control of pollution arising from the activities listed in Schedule one of these regulations.
L.N. 203 of 2002 - Malta Resources Authority Act, 2000 Regulations for the Protection of Groundwater against Pollution caused by Certain Dangerous Substances, 2002	MARRA- MRA	Dangerous substances	These regulations are aimed at the prevention of the pollution of groundwater by substances belonging to the families and group of substances in lists I or II of the schedule and as far as possible to check or eliminate the consequences of pollution which has already occurred.
L.N. 166 of 2002 - Environment Protection Act (Act No. XX of 2001) Waste Management (Polychlorinated Biphenyls and Polychlorinated Terphenyls) Regulations, 2002	OPM - MEPA	PCBs	These regulations provide additional measures, procedures and guidance to those in the Waste Management (Permit and Control) Regulations, 2001, on the controlled disposal of Polychlorinated Biphenyls and Polychlorinated Terphenyls (PCBs) , the decontamination or disposal of equipment containing PCBs and, or the disposal of used PCBs in order to eliminate them completely.

Legislation	Responsible Ministry & Authority / Department / Company	Chemicals Covered	Objectives & Scope
L.N. 165 of 2002 - Environment Protection Act, 2001 - (ACT NO. XX of 2001) - Integrated Pollution Prevention & Control Regulations, 2002	OPM - MEPA	Pollutants	The objective of these regulations is to achieve integrated prevention and control of pollution arising from the activities listed in Schedule 1.
L.N. 163 of 2002 - Environment Protection Act (Act No. XX of 2001) Limit Values for Benzene and Carbon Monoxide in Ambient Air Regulations, 2002	OPM - MEPA	Benzene and Carbon Monoxide	The objective of these regulations is to: (a) to establish limit values for concentrations of benzene and carbon monoxide in ambient air intended to avoid, prevent or reduce harmful effects on human health and the environment as a whole; (b) to assess concentrations of benzene and carbon monoxide in ambient air on the basis of common methods and criteria; (c) to obtain adequate information on concentrations of benzene and carbon monoxide in ambient air and ensure that it is made available to the public; (d) to maintain ambient air quality where it is good and improve it in other cases with respect to benzene and carbon monoxide.
L.N. 161 of 2002 - Environment Protection Act (Act No. XX of 2001) Waste Management (Waste Oils) Regulations, 2002	OPM - MEPA	Waste	These regulations provide additional measures, procedures and guidance to those in the Waste Management (Permit and Control) Regulations, 2001, so that waste oils are collected and disposed of without causing any avoidable damage to humans and the environment.
L.N. 158 of 2002 - Environment Protection Act (Act No. XX of 2001) Waste Management (Batteries & Accumulators) Regulations, 2002	OPM - MEPA	Batteries & Accumulators	These regulations provide additional measures, procedures and guidance to those in the Waste Management (Permit and Control) Regulations, 2001, on the recovery and controlled disposal of those spent batteries and accumulators containing dangerous substances.
L.N. 139 of 2002 - Sewer Discharge Control Regulations, 2002 (as amended)	MITC - WSC	Waste	The control regulations on sewer discharge.

Legislation	Responsible Ministry & Authority / Department / Company	Chemicals Covered	Objectives & Scope
L.N. 340 of 2001 - Environment Protection Act (Act No. XX of 2001) Urban Waste Water Treatment Regulations, 2001	OPM - MEPA	Waste	These regulations concern the collection, treatment and discharge of urban waste water and the treatment and discharge of waste water from certain industrial sectors. The objective of these regulations is to protect the environment from the adverse effects of the waste water discharges.
L.N. 339 of 2001 - Environment Protection Act (Act No. XX of 2001) Quality Required of Surface Water intended for the Abstraction of Drinking Water Regulations, 2001	OPM - MEPA	General	These regulations concern the quality requirements which surface fresh water used or intended for use in the abstraction of drinking water, hereinafter called "surface water", must meet after application of appropriate treatment. Ground water, brackish water and water intended to replenish water-bearing beds shall not be subject to these regulations.
L.N. 338 of 2001 - Environment Protection Act (Act No. XX of 2001) Supervision and Control of Shipments of Radioactive Waste Regulations, 2001	OPM - MEPA	Radioactive waste	These regulations shall apply to shipments of radioactive waste originating in Malta, shipments of radioactive waste the final destination of which is Malta and shipments of radioactive waste in transit whenever the quantities and concentration exceed the levels laid down in the first schedule to these regulations.
L.N. 337 of 2001 - Environment Protection Act (Act No. XX of 2001) Waste Management (Permit and Control) Regulations, 2001	OPM - MEPA	Waste	These regulations control all operations relating to the production and management of waste and promote sound waste management practices so as to safeguard human health and the environment.
L.N. 336 of 2001 - Environment Protection Act (Act No. XX of 2001) Waste Management (Incineration) Regulations, 2001	OPM - MEPA	Waste	These regulations supplement the Waste Management (Permit and Control) Regulations 2001, in preventing or limiting, as far as practicable, negative effects on the environment, in particular pollution by emissions into air, soil, surface water and groundwater, and the resulting risks to human health, from the incineration and co-incineration of waste.



Legislation	Responsible Ministry & Authority / Department / Company	Chemicals Covered	Objectives & Scope
L.N. 228 of 2001 - Environment Protection Act (Act No. XX of 2001) Prevention and Reduction of Environmental Pollution by Asbestos Regulations, 2001	OPM - MEPA	Asbestos	These regulations ensure that the asbestos emissions into the air, asbestos discharges into the aquatic environment, and solid asbestos waste are, as far as reasonably practicable, reduced at source and prevented. In the case of existing and new plants, the requirement in sub-regulation (1) that best available technology not entailing excessive costs be used to reduce and eliminate emissions of asbestos into the air shall be applied.
L.N. 227 of 2001 - Environment Protection Act (Act No. XX of 2001) Limit Values and Quality Objectives for Discharges of Certain Dangerous Substances Into the Aquatic Environment Regulations, 2001	OPM - MEPA	Dangerous substances	These regulations apply to the waters referred to in sub-regulation (2) of regulation (2) of the Pollution Caused by Certain Dangerous Substances Discharged into the Aquatic Environment Regulations, with the exception of ground water.
L.N. 226 of 2001 - Environment Protection Act (Act No. XX of 2001) Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol on Substances that Deplete the Ozone Layer (Incorporation) Regulations, 2001	OPM - MEPA	Ozone depleting substances	The Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol on Substances that Deplete the Ozone Layer form part of the laws of Malta. The texts of the said Vienna Convention and of the said Montreal Protocol appear in Annex I.
L.N. 225 of 2001 - Environment Protection Act (Act No. XX of 2001) Limitation of Emissions Volatile Organic Compounds Regulations, 2001 (as amended)	OPM - MEPA	VOCs	The purpose and scope of these regulations is to prevent or reduce the direct and indirect effects of emissions of volatile organic compounds into the environment, mainly into the air, and the potential risks to human health, by providing measures and procedures to be implemented for the activities defined in Annex I, in so far as they are operated above the solvent consumption thresholds listed in Annex IIA.

Legislation	Responsible Ministry & Authority / Department / Company	Chemicals Covered	Objectives & Scope
L.N. 224 of 2001 - Environment Protection Act (Act No. XX of 2001) Limit Values for Nitrogen Dioxide, Sulphur Dioxide and Oxides of Nitrogen, Particulate Matter and Lead in Ambient Air Regulations, 2001 (as amended)	OPM - MEPA	Nitrogen Dioxide, Sulphur Dioxide and Oxides of Nitrogen, Particulate Matter and Lead	The upper and lower assessment thresholds for sulphur dioxide, nitrogen and oxides of nitrogen, particulate matter and lead for the purposes of the Ambient Air Quality Assessment and Management Regulations, 2001 shall be those laid down in Section 1 of Annex V of this legal notice.
L.N. 223 of 2001 - Environment Protection Act (Act No. XX of 2001) Fees Ordinance (CAP. 35) Waste from the Titanium Dioxide Industry Regulations, 2001	OPM - MEPA	Titanium Dioxide	These regulations ensure the prevention and progressive reduction of pollution caused by waste with a view to its elimination.
L.N. 221 of 2001 - Environment Protection Act (Act No. XX of 2001) Limit Values and Quality Objectives for Cadmium Discharges Regulations, 2001	OPM - MEPA	Dangerous substances	These regulations apply to the waters referred to in regulation 2(2) of the Pollution Caused by Certain Dangerous Substances Discharged into the Aquatic Environment Regulations, 2001, with the exception of groundwater.
L.N. 220 of 2001 - Environment Protection Act (Act No. XX of 2001) Limit Values and Quality Objectives for Mercury Discharges by the Chlor-Alkali Electrolysis Industry Regulations, 2001	OPM - MEPA	Dangerous substances	These regulations apply to the waters referred to in regulation 2(2) of the Pollution Caused by Certain Dangerous Substances Discharged into the Aquatic Environment Regulations, 2001, with the exception of groundwater.

Legislation	Responsible Ministry & Authority / Department / Company	Chemicals Covered	Objectives & Scope
L.N. 219 of 2001 - Environment Protection Act (Act No. XX of 2001) Limit Values and Quality Objectives for Mercury Discharges by Sectors Other Than the Chlor-Alkali Electrolysis Industry Regulations, 2001	OPM - MEPA	Dangerous substances	These regulations apply to the waters referred to in regulation 2(2) of the Pollution Caused by Certain Dangerous Substances Discharged into the Aquatic Environment Regulations, 2001.
L.N. 218 of 2001 - Environment Protection Act (Act No. XX of 2001) Limit Values and Quality Objectives for Hexachlorocyclohexane Discharges Regulation, 2001	OPM - MEPA	Dangerous substances	These regulations apply to the waters referred to in regulation 2(2) of the Pollution Caused by Certain Dangerous Substances Discharged into the Aquatic Environment Regulations, 2001, with the exception of groundwater.
L.N. 216 of 2001 - Ambient Air Quality Assessment and Management Regulations, 2001 (as amended)	OPM - MEPA	Air quality	<p>The legal notice:</p> <ul style="list-style-type: none"> <li>•Sets a general policy framework for dealing with ambient air quality;</li> <li>•Does not look at the source of pollution, but on the effect on human health and the environment;</li> <li>•Requires to put in place systems for assessing ambient air quality based upon common methods and criteria;</li> <li>•Requires to maintain ambient air quality where it is good and improve it in other cases, by means of plans and programs of action;</li> <li>•Lays down provisions for a system of gathering, reporting and publicizing information. This includes both data reported to the Commission and information to the public.</li> </ul>

Legislation	Responsible Ministry & Authority / Department / Company	Chemicals Covered	Objectives & Scope
L.N. 213 of 2001 - Environment Protection Act (Act No. XX of 2001) Pollution Caused by Certain Dangerous Substances Discharged Into the Aquatic Environment Regulations, 2001	OPM - MEPA	Dangerous substances	These regulations ensures that the competent authority takes the necessary measures to eliminate pollution of the waters referred to in sub-regulation (2) of regulation 2 by the dangerous substances in the families and groups of substances in List I of the Annex. The competent authority shall take the necessary measures to reduce pollution of the said waters by the dangerous substances in the families and groups of substances in List II of the Annex, in accordance with these regulations.
L.N. 212 of 2001 - Environment Protection Act (Act No. XX of 2001) The Sludge (Use in Agriculture) Regulations, 2001	OPM - MEPA	Sludge	The purpose of these regulations is to regulate the use of sewage sludge in agriculture in such a way as to prevent harmful effects on soil, vegetation, animals and man, thereby encouraging the correct use of such sewage sludge.
L.N. 211 of 2001 - Environment Protection Act (Act No. XX of 2001) Combating of Air Pollution from Industrial Plants Regulations, 2001	OPM - MEPA	Air pollutants	With these regulations the competent Authority shall ensure that the operation of plants belonging to the categories listed in Annex I requires prior authorization by the said competent authority. Any operator of a plant which belongs to the categories listed in Annex I or which, as a result of the alteration, will fall within those categories shall require authorization from the competent authority. The competent authority may require other categories of plants to operate with a licence unless special conditions are complied with.
L.N. 205 of 2000 - Environment Protection Act (CAP. 348) Environment Protection (Control of Transboundary Movement of Toxic and other Substances) Regulations, 2000	OPM - MEPA	Dangerous substances	These regulations put into effect the obligations on the transboundary movement of hazardous waste and their disposal as arising under the Basel Convention on the control of transboundary movement of hazardous waste and their disposal.

Legislation	Responsible Ministry & Authority / Department / Company	Chemicals Covered	Objectives & Scope
LN 1/1996 - Dangerous Cargo Ships, Marine Terminals and Facilities and Bunkering Regulations (as amended)	MITC - MMA	Petroleum Products	These regulations regulate the movement, transfer, storage, and handling of dangerous cargoes, bunkers, ballast and tank cleaning operations on all ships and at all marine terminals and facilities within or connected to the internal and territorial waters of Malta
L.N. 133 of 1995 - Environment Protection Act (Act No.V of 1991) Environment Protection (Control of Substances Depleting the Ozone Layer) Regulations, 1995	OPM - MEPA	Ozone depleting substances	These regulations are intended to control the importation, exportation, use, carriage, storage, destruction or disposal of controlled substances which are considered to be potentially toxic in order to limit and phase out these substances in accordance with Malta's international obligations.
LN 40/1986 - Petroleum (Petrol Stations) (as amended)	MRRA - MRA	Petroleum Products	Licence Fees
LN 18/1978 - Petroleum Licence Fees (as amended)	MRRA - MRA	Petroleum Products	Licence Fees
LN 9/1974 - Kerosene Control Regulations (as amended)	MFEI	Kerosene	Prohibition of use and mixing; Grant of permits
LN 54/1965 - Petroleum Ships (Extension) Order (as amended)	MITC - MMA	Petroleum Products	Petroleum (Importation, Storage and Sale)
LN 53/1965 - The Petroleum Ships Regulations (as amended)	MITC - MMA	Petroleum Products	Petroleum (Importation, Storage and Sale)

#### 4.2. Existing Legislation by Use Category Addressing Various Stages of Chemicals from Production/Import through Disposal

*Table 4.B: Overview of Legal Instruments to Manage Chemicals by Use Category<sup>29</sup>*

Use Category	Import	Production	Storage	Transport	Distribution/Marketing	Use/Handling	Disposal
Pesticides	X	X	X	X	X	X	X <sup>30</sup>
Cosmetic Products	X	X	X	X	X	X	
Detergent Products	X	X	X	X	X	X	
Petroleum Products	X		X	X	X	X	X <sup>31</sup>
Chemical Wastes	X	X	X	X		X	X
Other Chemical Substances & Mixtures	X		X	X	X	X	

#### 4.3. Summary Description of Key Approaches and Procedures for Control of Chemicals and Related Waste

##### 4.3.1. Pesticides

##### 4.3.1.1. Plant Protection Products

A number of controls are carried out to monitor the plant protection products on the market so as to ensure consumer, operator and environment protection.

Prior to placing a plant protection product on the local market an authorization from the local competent authority (MSA) has to be issued. Most authorizations issued in Malta are carried out through mutual recognition that is the product would have been already placed on the market of another EU member state. To acquire such an authorization the manufacturer presents the following documents to the MSA:

- Duly filled-in and signed application form which can be downloaded from the MSA website;
- Safety Data Sheet of the product;
- Valid authorization certificate issued by the Member State where the product is authorized;
- Original label - English and Maltese translation of the label;
- Letter of Access - if the ownership of data is not the same as the applicant and the active ingredient is an approved ingredient and included in Annex I to Directive 91/414/EC; and

<sup>29</sup> "X" denotes that the specific stage is adequately addressed through legislation

<sup>30</sup> In collaboration with MSA, WasteServ has recently proposed two sites, one located in Malta and the other one in Gozo, for the waste collection of empty and full containers of pesticides.

<sup>31</sup> Sludge generated from Tank Cleaning (Source: Enemalta, 2009)

- A technical dossier or summary dossier supplying the information necessary as described in Council Directives 86/609/EEC and 87/18/EEC, Regulation 1907/2006 and the Annex III of Council Directive 91/414/EEC. If this is not yet available a letter confirming that a copy will be sent to the MSA once it is available should be attached to the application form.

These documents are necessary so that the authority makes the necessary examinations to ensure that the product can be safely used in the local conditions while ensuring that adequate information for operator, consumer, bystander and environmental protection is present on the label.

The authorizations are usually valid for two years, after which the product may be re-registered. However within the two years the authorization may also be withdrawn in case of a valid reason such as new information on the product which reveals that the use of the product is having negative impacts either on human or environmental health. Furthermore, several inspections are carried out as a surveillance system of the local market, at farmers, retailers and importers level.

Inspections on pesticides are carried out by the Market Surveillance Directorate (MSD) within MSA. The total number of inspections made to outlets selling plant protection products during the period between January 2009 and June 2009 is twenty-five. In total, two hundred forty-six plant protection products were inspected.

Inspections at farmers' levels are carried out to verify that products being used by farmers are those which have actually been registered by the MSA and that these are being used in accordance with the instructions presented on the labels. In addition, during the inspections the personal protective equipment and storage methods of the products are also taken into consideration. Further inspections carried out at farmers levels are those related to maximum residue levels of plant protection products on fruit and vegetables placed on the market. The latter inspections are also carried out on retailers and importers who place products of plant and animal origin on the market.

Inspections at importers and retailers who place plant protection products on the market are also carried out to ensure that the plant protection products placed on the market are actually those which have been registered with the MSA. Further to this, the labelling of the products, placed on the market, are also checked.

#### 4.3.1.2. *Biocides*

There are three procedures, depending on the active substance, by which a biocidal product can be placed on the market.

If the active substance is still pending approval and listed in Annex I of the Biocide Regulations, a notification is necessary in Malta. This is done by downloading the required form from MSA's website and submitting the labels, safety data sheet and the signed form. A notification is usually issued depending on the active substances and product type. The validity of this notification is for two years or less if the Annex I listing (or the decision for a non-inclusion) is less than two years.

When the active substance is listed in Annex I, the notification is not valid anymore, and the manufacturing company (or the owner of the active substance) will have to apply for an authorization of a biocidal product through the Register for biocidal products (R4BP) at Commission level. The owner has to choose a Member State where to authorize the product. A certificate with an authorization number is then issued.

If a decision is taken that the active substance will not be listed in Annex I, the active substance will be banned and a grace period is given so that any stocks remaining will be exhausted. The first notification that was issued will not be valid anymore.

When the product is authorized within a Member State, the owner may then apply for a mutual recognition in other Member States. The owner must present the certificate issued by the Member State authorizing the product for the first time on the market to the other countries where the owner is intending to apply for a simple registration to place the product on the market.

One must note that a notification is only valid before the active substance is put in Annex I. A notification cannot take place instead of a mutual recognition.

All biocidal products must be first notified and then authorized/mutually recognized before being placed on the market. A mutual recognition is required in every Member State the product is to be sold. Therefore it is not a free market.

One must not forget that a biocidal product has to be authorized according to its product type. There are twenty-three different product types. If for example a biocidal product has been authorized for use for product type 2, a new authorization must be issued if it is intended to be used as product type 3.

Currently market surveillance of biocides is done only on a reactive basis. When a complaint is received it is made sure by the MSD that product complies with the current biocides legislation. Pro-active inspections will start as soon as the new legislation comes into force.

#### 4.3.2. Fertilisers

Tests on groundwater indicate a significant problem with nitrate content. Fertilisers (both natural and artificial) have been identified as the main contributors to this contamination and their use should be regulated.

Although there are several regulations in place (such as the Protection of Waters against Pollution caused by Nitrates from Agricultural Sources Regulations, 2001 - LN 343 of 2001) the Water Directorate at MRA is concerned with the lack of implementation and enforcement of controls on the use of fertilisers.



### 4.3.3. Chemical Substances & Mixtures Regulated under REACH and CLP

#### 4.3.3.1. REACH

All manufacturers and importers of chemicals must identify and manage risks linked to the substances they manufacture and market. For substances manufactured or imported in quantities of 1 tonne or more per year per company, manufacturers and importers need to demonstrate that they have appropriately done so by means of a registration dossier, which must be submitted to the European Chemicals Agency (ECHA).

The Agency may then check that the registration dossier complies with the Regulation and must evaluate testing proposals to ensure that the assessment of the chemical substances will not result in unnecessary testing, especially on animals. Where appropriate, authorities may also select substances for a broader substance evaluation to further investigate substances of concern.

REACH also foresees an authorisation system aiming to ensure that substances of very high concern are properly controlled, and progressively replaced by suitable alternative substances or technologies where these are economically and technically viable. Where this is not possible, the use of substances may only be authorised where there is an overall benefit for society of using the substance.

In addition, EU authorities may impose restrictions on the manufacture, use or placing on the market of substances causing an unacceptable risk to human health or the environment.

#### 4.3.3.2. Substances of Very High Concern (SVHC)

In the framework of the authorisation process, Member States Competent Authorities or the ECHA, on a request by the Commission, may prepare Annex XV dossiers for the identification of substances of very high concern (SVHC). SVHC are defined in Article 57 of the REACH Regulation (EC) No 1907/2006 and include substances which are:

- Carcinogenic, Mutagenic or toxic to Reproduction (CMR), meeting the criteria for classification in category 1 or 2 in accordance with Directive 67/548/EEC;
- Persistent, Bioaccumulative and Toxic (PBT) or very Persistent and very Bioaccumulative (vPvB) according to the criteria in Annex XIII of the REACH Regulation; and/or
- Identified, on a case-by-case basis, from scientific evidence as causing probable serious effects to human health or the environment of an equivalent level of concern as those above (e.g. endocrine disrupters).

*Table 4.C: Identified list of Substances of Very High Concern (SVHC) according to REACH*

Name of Chemical Substance	CAS No.	EC No.
Anthracene	120-12-7	204-371-1
4,4'- Diaminodiphenylmethane	101-77-9	202-974-4
Dibutyl phthalate	84-74-2	201-557-4
Cyclododecane	294-62-2	206-33-9
Cobalt dichloride	7646-79-9	231-589-4
Diarsenic pentaoxide	1303-28-2	215-116-9
Diarsenic trioxide	1327-53-3	215-481-4
Sodium dichromate, dihydrate	7789-12-0	
5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	81-15-2	201-329-4
Bis (2-ethyl(hexyl)phthalate) (DEHP)	117-81-7	204-211-0
Hexabromocyclododecane (HBCDD)	25637-99-4	247-148-4
Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	85535-84-8	287-476-5
Bis(tributyltin)oxide	56-35-9	200-268-0
Lead hydrogen arsenate	7784-40-9	232-064-2
Triethyl arsenate	15606-95-8	427-700-2
Benzyl butyl phthalate	85-68-7	201-622-7

Information on the market restrictions of substances and banned substances can be found in part C of Annex 2.

#### 4.3.3.3. CLP

The CLP regulation sets the rules for classification and labelling of chemicals. It aims to determine whether a substance or mixture displays properties that lead to a classification as hazardous.

Once such properties are identified and the substance or mixture is classified accordingly, manufacturers, importers, downstream users and distributors of substances or mixtures, as well as producers and importers of certain specific articles (explosive articles which are subject to classification according to Part 2 of Annex I to CLP), should communicate the identified hazards of these substances or mixtures to other actors in the supply chain, including to consumers.

The hazard of a substance or mixture is the potential for that substance or mixture to cause harm. It depends on the intrinsic properties of the substance or mixture. In this connection hazard evaluation is the process by which information about the intrinsic properties of a substance or mixture is assessed to determine their potential to cause harm. In cases where the nature and severity of an identified hazard meets the classification criteria, hazard classification is the assignment of a standardised description of this hazard of a substance or a mixture causing harm to human health or the environment.

Hazard labelling allows for the communication of hazard classification to the user of a substance or mixture, to alert the user to the presence of a hazard and the need to avoid exposures and the resulting risks.

CLP sets general packaging standards, in order to ensure the safe supply of hazardous substances and mixtures.

#### *4.3.3.4. Harmonised classification & labelling*

Suppliers of chemicals (substances and mixtures) across the EU have a legal obligation to evaluate the hazards of chemicals and to classify and label them in an appropriate way before placing them on the market. In addition, individual EU Member States (competent authorities) or industry may ask for the classification and labelling of a substance to be harmonised across Europe. This may happen in three situations:

- Where the substance is either:
  - o carcinogenic;
  - o mutagenic;
  - o toxic for reproduction; and/or
  - o a respiratory sensitiser.
- When the substance is an active substance in a biocidal or plant protection products or
- When there is a need to harmonise the classification at the EU level, for example when the suppliers classify the same substance in a different way.

The proposal for harmonisation is submitted to ECHA along with a dossier which outlines the scientific reasons for making the request. ECHA receives these proposals and organises a public consultation. Eventually, the Commission, assisted by the REACH Regulatory Committee involving representatives of the EU Member States, then decides on the classification and labelling of the substance concerned (the so-called Comitology procedure).

#### *4.3.3.5. National Helpdesk*

The National REACH/CLP helpdesk is a service established in every Member State providing advice to companies and other stakeholders on the obligations they may have under REACH/CLP. These are both located within the RAD at MSA.

The national helpdesks provide a wide range of information on the provisions of REACH/CLP as well as advice on the responsibilities that should be fulfilled under these Regulations.

The national helpdesk provides the service in the official language(s) of Malta and it also provides information on certain aspects of enforcement.

#### *4.3.3.6. Enforcement of REACH, Dangerous Substances/Mixtures & CLP Regulations*

The MSD within MSA is responsible for enforcing REACH, the dangerous substances/mixtures and CLP regulations through inspections as well as penalties in case of non-compliance.

Five inspections have been made to outlets selling dangerous chemicals in the period between January 2009 and June 2009. Twelve dangerous chemicals have been inspected in total. The legal requirements checked during these inspections include the following:

- Trade name of product;
- Name, full address and telephone number of the EU representative;
- Capacity of package;
- Approximate label dimensions;
- Language of label;
- Name of substance/Ingredient List;
- Danger symbols present;
- R-phrases;
- S-phrases;
- Design of package; and
- Additional requirements such as the child resistant fastening and the tactile warning sign.

Regarding the REACH regulations, enforcement started in August 2009, since Malta is participating in the REACH-Enforcement-FORCE 1 project, which was launched by ECHA. Areas that are being tackled during the inspections include the following:

- General information about the Company;
- Company within the Scope of the REACH regulation: Registration;
- Specific details about the REACH Regulation: Registration;
- Details regarding Information Obligations in the Supply Chain & Material Safety Data Sheets; and
- CLP regulation.

#### 4.3.4. Cosmetic Products

The manufacturer or his agent, or the person to whose order a cosmetic product is manufactured, or the person responsible for placing imported cosmetic products on the market, shall notify the RAD within MSA. The notification procedure requires the manufacturer/importer:

- to duly fill and sign the Cosmetic Product Registration Form<sup>32</sup>; and
- to submit this form to the authority together with the original (or copy) label of the product.

The cosmetic product is only notified if the label complies with the cosmetics regulations and all the requested information is submitted to the authority. Notifications issued by the authority do not constitute an approval of the cosmetic product. The responsibility for the safety of the product lies always on the person placing on the market the cosmetic product.

Such notification shall not be necessary in the case of products which have already been placed on the market within the European Community.

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<sup>32</sup><http://www.msa.org.mt/rad/cosmetics/Notification%20of%20Products/Cosmetic%20Product%20Registration%20Form%20R2.pdf>

#### 4.3.4.1. Enforcement of the Cosmetic Regulations

The cosmetic products placed on the market are controlled by the MSD within MSA. The total number of inspections that have been carried out during the period between January 2009 and June 2009 was thirty. Hundred and eleven cosmetic products have been inspected in total. During these controls the main legal requirements that are inspected include the following:

- Brand name;
- Type of cosmetic;
- Manufacturer;
- Country of origin;
- Nominal content;
- Durability sign/Best Before Date;
- Language used on the label;
- Traceability;
- List of ingredients following the International Nomenclature of Cosmetic Ingredients; and
- Functions & precautions.

#### 4.3.5. Detergent Products

Detergent products do not need to be notified/registered with the MSA, in fact there are no records on what type of detergents are placed on the Maltese market. The detergent products are only controlled by means of the inspections carried out by the MSD.

The total number of inspections made to local outlets selling detergents during the period between January 2009 and June 2009 is thirty-six. During these inspections two hundred and twenty-four detergent products were investigated. The following legal requirements are checked during inspections:

- Brand name;
- Type of detergent;
- Manufacturer;
- Address & Telephone number of contact person;
- Nominal content;
- Instructions for use & precautions;
- Language;
- Contents labelling; and
- Dosage.

#### 4.3.6. Petroleum Products

A memorandum of understanding (MOU) was established between MRA and MMA on bunkering operations. The MOA describes a formal method for the processing of permits and licences required by bunkering operators for petroleum products. No formal meetings are held but applications are processed through the established procedure. MRA is also drafting an MOU on fuel quality with MMA.

As for the data collection for the issuing of authorisations for the importation/wholesaling of petroleum products and/or for operating primary storages facilities, MRA is currently working on another MOU, this time with the CD. Although MRA are the regulators for the petroleum products the customs are responsible for the set-up and enforcement. As to be established on the MOU, it is also intended to adopt a procedure for the monitoring of the importation of petroleum products, particularly those released for consumption in the inland petroleum market and which are subject to excise duty.

#### 4.4. Regulatory Instruments for Related Activities which Impact on Chemicals Management

*Table 4.D: Legal tools that indirectly impact the management of chemicals*

Legislation	Responsible Ministry & Authority / Department / Company	Objectives & Scope
L.N. 194 of 2004 - Water Policy Framework Regulations, 2004	MARRA - MRA	The regulations define MRA as the competent authority provided that the MEPA be responsible for surface waters found in areas protected by scheduling declarations under the Development Planning Act or otherwise protected under the EPA.
L.N. 203 of 2002 - Protection of Groundwater against Pollution caused by Certain Dangerous Substances Regulations, 2002 (as amended)	MARRA - MRA	Surveillance of Disposals and Discharges
L.N. 108 of 2009 - Protection of Groundwater against Pollution and Deterioration Regulations, 2009	MARRA - MRA	<ul style="list-style-type: none"> <li>- This set of legislation requires that threshold values are set for a number parameters in groundwater, so that good quality status is achieved and retained. A monitoring programme has to be established to monitor parametric values and trends. Direct discharges to groundwater, as a method of disposal are not allowed.</li> <li>- MRA is responsible for these regulations, on a National scale.</li> <li>- The level and nature of enforcement is limited due to lack of financial and human resources.</li> </ul>

#### 4.5. Assessment and Comments

Since the national legislation is based on the EU legislation all the regulations are harmonized. There may be no overlap among the regulations themselves however there might be some overlap in the work carried out by the different authorities that deal with different aspects on the management of chemicals.

When taking into consideration the broad areas being covered, enforcement can be greatly improved. With the available resources the areas being enforced have to be prioritised and often enforcement is rather reactive rather than being proactive. In order to fully enforce the areas being covered there is an acute need for a greater availability of resources.

In the case of fertilizers it was identified that only EC fertilisers are regulated while the non-EC fertilisers are considered as general chemicals and thus have to follow the regulations concerning chemicals.

5. Ministries, Agencies and Other Institutions Managing Chemicals and Waste

5.1. Responsibilities of Different Government Ministries, Agencies and Other Institutions

*Table 5.A: Responsibilities of Government Ministries, Authorities and Other Departments<sup>33</sup>*

Ministry / Authority / Department	Importation	Production	Storage	Transport	Distribution /Marketing	Use/ Handling	Disposal
<b>PESTICIDES</b>							
MFEI Malta Standards Authority	X	X	X		X	X	
OPM Malta Environment & Planning Authority			X				X
MRRA WasteServ Malta Ltd.							X
MFEI Customs Division	X						
MFEI Trade Services Directorate	X						
MITC Malta Transport Authority				X			
<b>COSMETIC PRODUCTS</b>							
MFEI Malta Standards Authority	X	X	X		X	X	
OPM Malta Environment & Planning Authority							X
MRRA WasteServ Malta Ltd.							X
MFEI Customs Division	X						
MFEI Trade Services Directorate	X						
MITC Malta Transport Authority				X			
MSOC Occupational Health & Safety Authority						X	
<b>DETERGENT PRODUCTS</b>							
MFEI Malta Standards Authority	X	X	X		X	X	
OPM Malta Environment & Planning Authority							X
MRRA							X

<sup>33</sup> "X" denotes that the institution is responsible for a particular stage of the chemical's life-cycle



Ministry / Authority / Department	Importation	Production	Storage	Transport	Distribution /Marketing	Use/ Handling	Disposal
WasteServ Malta Ltd.							
MFEI Customs Division	X						
MFEI Trade Services Directorate	X						
MITC Malta Transport Authority				X			
MSOC Occupational Health & Safety Authority						X	
<b>PETROLEUM PRODUCTS</b>							
MFEI Malta Standards Authority	X	X				X	
MITC Enemalta Corporation	X		X	X	X	X	X
MRRA Malta Resources Authority	X		X	X	X	X	
MITA Malta Maritime Authority	X		X				
OPM Malta Environment & Planning Authority						X	X
MRRA WasteServ Malta Ltd.							X
MFEI Customs Division						X	
MFEI Trade Services Directorate	X						
MITC Malta Transport Authority				X			
MSOC Occupational Health & Safety Authority						X	
<b>Other CHEMICAL SUBSTANCES &amp; MIXTURES</b>							
MFEI Malta Standards Authority	X	X	X		X	X	
OPM Malta Environment & Planning Authority			X				X
MRRA WasteServ Malta Ltd.							X
MFEI Customs Division	X						
MITC Malta Transport Authority				X			
MSOC Occupational Health & Safety Authority						X	

## 5.2. Description of Ministerial Authorities and Mandates

### 5.2.1. Office of the Prime Minister (OPM)

The Prime Minister of Malta is both the head of government and a minister in his own right with portfolio responsibilities for strategic matters such as the Public Service, defence, EU matters including the management of EU pre-accession and structural funds.

Most of these portfolio responsibilities are administered through the Office of the Prime Minister, commonly known as OPM or simply "Kastilja". OPM's mission is to support the Prime Minister in providing leadership and direction for a stable and effective government.

OPM is the hub and nerve centre of the Government. It plays a central role in decision-making and it is also the administrative headquarters of the Government.

#### 5.2.1.1. Armed Forces of Malta (AFM)

The AFM is tasked to perform two defence roles:

- *Primary Defence Role:* The AFM is responsible for the external security and integrity of the Maltese Islands in peacetime and in crisis; and
- *Secondary Defence Role:* The AFM provides military support in specified areas to the Police Force on a regular basis and to other government departments when required.

#### 5.2.1.2. Staff Development Organisation (SDO)

Various activities are organised during the year ranging from basic skills to senior management programmes to seminars and courses for foreign delegates, 2008 saw the department's strategy being adapted to suit an ever-changing environment not least through SDO's role in the setting up of the new Centre for Policy Research and Training.

At the beginning of 2008 SDO had been tasked with the co-ordination of the setting up of a National School of Government for the Maltese Public Service to be called Centre for Policy Research and Training (CPRT). Apart from enhancing the existent SDO training standards, the new CPRT would also consolidate the policy research function together with training and academic development.

#### 5.2.1.3. Management Efficiency Unit (MEU)

The MEU seeks to be recognised as a value-based, service-oriented entity that excels in the field of public sector management consultancy and that is able to respond effectively to the changing needs of the wider public sector.

To deliver its operational thrust, the MEU has, through its multi-disciplined base of professionals, offered and provided the following services:

- *Formulation and Implementation of cross-Government Programmes*

- *Policy Development*
- *Strategic Planning and Reviews*
- *Mandate Reviews, Organisational Consolidation and Restructuring*
- *Re-engineering of Business Processes*
- *Consultation and Communications Strategies*

#### 5.2.1.4. *Defence Matters Directorate*

The main responsibilities of the Directorate are to: provide objective technical and policy advice as well as timely analysis on all aspects of military matters affecting the Government's defence policy; to monitor and analyse the implementation of Cabinet decisions and government policies on defence matters and to report on the extent to which policy and performance targets are met; to develop new policy initiatives and concepts on all AFM matters with a view to improving the operational, logistic and administrative effectiveness of the AFM; in co-ordination with other stakeholders within OPM, and in liaison with the Ministry of Foreign Affairs, conduct defence diplomacy, to manage bilateral as well as multilateral defence relations with other countries and international organisations.

#### 5.2.1.5. *Tourism*

The aim of the Department of Tourism is to offer support and advice on issues related to human resource management, finance and administration to the Ministry for Tourism and Culture, the Permanent Secretary and other departments and entities falling under the Ministry. It also supports the Ministry in promoting the importance of tourism to the national economy at all community levels and the public sector.

*Oil Pollution Response Module* - The Oil Pollution Response Module (OPRM) is established to protect Malta's coastline and harbours from oil pollution and other hazards that may be caused by oil spills (that originate both on land or sea) or floating debris and other materials. It is the responsibility of this module to collect debris and flotsam from the sea on a routine basis either by scooping or by gathering pollutants and hazards manually or by using the vessel *Ambjent* which is fitted with a hydraulic/mechanical arm.

According to Bernt Bluhm, Head of the Pollution Preparedness and Response Unit within the European Maritime Safety Agency (EMSA), Malta is well prepared and all synergies are in place in case an oil spill incident had to occur in territorial waters.

#### 5.2.1.6. *Department for Local Government*

The major highlight with respect to local government during 2008 was the launch of the local government reform process that consisted of a consultation process involving all stakeholders.

The following list includes some of the new initiatives:

- **Waste Separation from Households:** In line with central government's national waste strategy, all the local councils have, since May 2008, started participating in the waste separation strategy. All councils have contributed towards the

- distribution of free waste separation (grey) bags. In addition, they also undertook to include an additional waste collection service on Tuesdays for separated waste.
- Assistance to Local Councils by MEUSAC: In August 2008, the DLG issued a circular to all councils informing them that the Funding Unit within MEUSAC would be assisting those councils that wished to avail themselves of EU programmes not forming part of the ERDF or the ESF. This service to local councils is free of charge.
  - Cultural Events Scheme
  - Scheme for Energy Saving Projects by Local Councils

#### 5.2.1.7. *Malta Tourism Authority (MTA)*

The Malta Tourism Authority (MTA) has a diverse role, but one which in essence is all about creating and fostering relationships. The MTA is the tourism industry's regulator and motivator, its business partner, the country's brand promoter, and is here to form, maintain and manage meaningful partnerships with all tourism stakeholders.

Primarily, this means talking to visitors to the Islands, but also to work closely alongside the private sector partners. Importantly, the MTA is also here to help strengthen the industry's human resources, ensure the highest standards and quality of the Islands' tourism product, and foster relations with local and international media. The Malta Tourism Authority is here to assist and advise on any tourism-related issues and to undertake activities and projects to fulfil our role.

#### 5.2.1.8. *Malta Environment and Planning Authority (MEPA)*

The Malta Environment and Planning Authority (MEPA) is the designated competent authority for two primary portions of Maltese legislation - the Development Planning Act (Cap 356 of 1992) and the Environment Protection Act (Cap 435 of 2001). MEPA was set up to act as a regulator in both the planning and environmental sectors. It is also vested with policy-making powers in respect of land use and planning.

The Development Planning Act (DPA) established MEPA through the setting up of the MEPA Board, to be composed of a maximum of fifteen members, one of which is the Chairperson of the Authority. The MEPA Board acts as the central guidance to MEPA's operations and provides direction for the planning and environment Directorates. It also acts as the decision-making body in the granting of certain development and environmental permits. The DPA also provides for the establishment of commissions, advisory boards and committees, together with other structures, in order to assist the Authority to perform its functions.

*Development Planning Directorate* - formulates and implements development plans at both a national and local level within a sustainable development context. The policy function undertaken by MEPA lies mainly with the Forward Planning Unit which is entrusted with the formulation of land use policy and strategic planning. Perhaps the operations which characterize this Directorate in the eyes of the public are its development control and enforcement functions.

*Environment Protection Directorate* - is responsible for the regulation of all activities which impact or might potentially impact the environment. This Directorate

formulates strategies, regulations and guidelines, monitors their adherence and regulates activities that may negatively impact the environment through a licensing and permitting system.

#### 5.2.2. Ministry of Foreign Affairs (MFA)

The role of the Ministry of Foreign Affairs (MFA) is ensuring that Malta's foreign policy objectives on European Union, bilateral, regional and global issues are pursued. The Ministry also coordinates the negotiation and conclusion of bilateral agreements. Moreover, MFA ensures active participation in the European Union's Common Foreign and Security Policy (CFSP). It also maintains and enhances Malta's relations with international organizations, including the United Nations and its Agencies and the Commonwealth.

#### 5.2.3. Ministry for Infrastructure, Transport and Communications (MITC)

##### 5.2.3.1. Malta Maritime Authority (MMA)

The Ports Directorate, within MMA, which is considered as the Port Authority for all the Ports in Malta, has a regulatory and managerial role. As a port regulator, the Directorate is responsible for:

- Preservation of good order in internal and territorial waters;
- Safety of navigation;
- Overall control of port work;
- Provision of port workers;
- Prevention and control of pollution;
- Provision of pilotage, fire fighting facilities, supplies and other ship requirements.

It is also the Government agency responsible for the licensing of marine commercial craft. The Directorate is also responsible for managing and developing the Ports in Malta in an efficient and effective way. In fact it is responsible for port development and the provision of plant and equipment, whilst other port related services, including cargo operations, are contracted out or leased to the private sector.

The MMA in March 2009 assumed the role of National Competent Authority responsible for national preparedness to combat pollution incidents. Apart from MMA's Emergency Control Centre in Marsa, other entities are involved in controlling pollution incidents, including the Armed Forces, the Police, MEPA, the Civil Protection Department, the Health Department, the Physical Oceanography Unit of the University of Malta, the Meteorological Office at the Malta International Airport, REMPEC (Regional Marine Pollution Response Centre for the Mediterranean) and the Oil Pollution Response Module.

In May 2008, the Authority initiated a project supported by a €1 million grant from Iceland, Liechtenstein and Norway through the EEA Financial Mechanism aimed at increasing Malta's capability to respond to vessel sourced pollution. Through studies carried out a new National Contingency Plan was drawn up and is in process of being implemented. The project is also financing the procurement of offshore pollution response equipment which is expected to be delivered in the first part of 2010.

#### 5.2.3.2. Malta Transport Authority (ADT)

The main aim of the Malta Transport Authority (ADT) is to plan and provide for a sustainable, high quality, safe, integrated and efficient land transport system that will meet the travelling needs of people and the transport requirements for the movement of goods within the national framework for economic development, social inclusion and protection of the environment.

ADT have no records of the amounts of chemicals that are being transported since they have only a regulatory role however they are involved in the enforcement of ADR (Transport of Dangerous Goods by Road Regulations) and other MVR (Motor Vehicle Regulations) legislation (e.g. emission testing and goods vehicle weighing). ADR covers all transport of dangerous goods by road that involves labelling, marking, documentation, safety equipment on vehicles/tank containers/MEGC's/receptacles, packing, packaging and labeling of goods, and training of drivers and Dangerous Goods Safety Advisers (DGSA).

The ADT enforces ADR by performing regular road side checks but is somewhat limited in its enforcing powers. Immobilisation and impounding of vehicles is difficult as the ADT does not dispose of facilities for such an eventuality. 'On the spot' fines cannot be issued in the Maltese islands, as is done in most EU countries, as they are not provided for in local legislation and court cases have to be attended to for every case. There are no fines specific to the transport of dangerous goods by road and the ones applied are barely a deterrent.

Dangerous goods are classified in 9 different classes as follows:

- Class 1 - Explosives
- Class 2 - Gases
- Class 3 - Flammable Liquids
- Class 4 - Flammable Solids
- Class 5 - Oxidising Substances
- Class 6 - Toxic Substances
- Class 7 - Radioactives
- Class 8 - Corrosives
- Class 9 - Miscellaneous Dangerous Goods

ADR covers all these classes of dangerous goods therefore the legislation covers all types of transport of dangerous goods.

#### 5.2.3.3. Water Services Corporation (WSC)

The Water Services Corporation was set up in 1993 to produce and distribute potable water in the Maltese Islands. Some thirty-one million cubic meters of good quality water are produced annually to cater for the needs of Malta's 400,000 inhabitants as well as the over 1 million tourists who visit every year.

Approximately fifty-seven percent of this water is produced at the Corporation's three reverse osmosis plants namely, *Pembroke*, *Ċirkewwa* and *Għar Lapsi*. The remaining

water is groundwater that is produced from boreholes and pumping stations. In October 2003, the former Drainage Section, now known as the Wastewater Section, was incorporated within the WSC. This means that the Corporation is wholly responsible for the complete water cycle from production to its safe disposal.

#### *5.2.3.4. Enemalta Corporation*

Enemalta Corporation offers a broad range of services to both the industrial, commercial and domestic sectors in the energy field. Set up in 1977 the Corporation today undertakes a broad range of operations, incorporating the importation and distribution of petroleum products and liquefied petroleum gas as well as the generation and distribution of electricity to all sectors of Maltese society.

The Petroleum Division is responsible for the programming, importation, storage and distribution of all petroleum products and Liquid Petroleum Gas in Malta. The Fuel Procurement Committee of Enemalta is responsible for the acquisition of products and the chartering of vessels and tankers for the transportation of these products to Malta. Discussions are currently being held with a view to commercializing this Division.

The main objective of the Gas Division is to store and bottle liquefied petroleum gas in cylinders and bulk service on behalf of Liquigas Malta Ltd, which are the new concessionaires in charge of the gas distribution as from 1<sup>st</sup> of February 2009. Liquid Petroleum Gas is purchased and brought over in shipments and piped to the storage facilities at *Qajjenza*. This is then bottled in cylinders of 10 kg, 12 kg, 15 kg (normally used in households) and 25 kg for commercial establishments. There are places like hotels and industries that have storage facilities and these purchase their LPG requirements in bulk. This Division is run from its Depot and Main Offices at *Qajjenza B'Bugia*.

Employing a workforce of nearly 2,000 people Enemalta plays a significant role in the economic development of the country, contributing towards the growth of both the industrial and commercial sectors by strengthening the island's infrastructural base. The last few years have seen the Corporation extending and consolidating the electricity transmission system whilst upgrading its generation facilities. At the same time, Enemalta is bracing itself to face the challenges of globalisation and a fast developing new world economy. Today, the Corporation is becoming more focused on environmental considerations to create a safer and more sustainable habitat for the Maltese people.

#### *5.2.4. Ministry for Resources and Rural Affairs (MRRA)*

##### *5.2.4.1. Malta Resources Authority (MRA)*

The Malta Resources Authority (MRA) is a public corporate body with regulatory responsibilities relating to water, energy and mineral resources in the Maltese Islands. The MRA has wide ranging responsibilities essentially involving regulation of water and energy utilities, industrial enterprises exploiting resources such as oil exploration, quarry operators and private abstractors of groundwater, retailers, operators and tradesmen in the regulated sectors.

To fulfill its responsibilities three directorates are established within the Authority namely:

- Directorate for Energy Resources Regulation with responsibility for the regulation of all practices relating to generation, transmission, distribution, supply and use of energy, whatever the sources of any such energy;
- Directorate for Water Resources Regulation with responsibility for the regulation of all practices relating to water resources, drainage and sewage;
- Directorate for Mineral Resources Regulation with responsibility for the regulation of all practices relating to mineral resources.

With respect to the Energy Sector, the MRA has various duties and responsibilities, including the following:

- to regulate, monitor and keep under review all practices, operations and activities relating to energy;
- to grant any licence, permit or other authorisation, for the carrying out of any operation or activity relating to energy;
- to regulate and secure interconnectivity for the production, transmission and distribution of the services or products regulated by or under the MRA Act;
- to carry out studies, research or investigation on any matter relating to the resources regulated by or under the MRA Act;
- to provide information and issue guidelines to the public and to commercial and other entities on matters relating to these resources;
- to establish measures for the protection of the environment and to promote the efficient use of resources in the practices, operations and activities regulated by or under the MRA Act;
- to ensure that international obligations entered into by the Government relative to the matters regulated by or under the MRA Act are complied with;
- to advise the Minister on the formulation of policy in relation to matters regulated by the MRA Act, and in particular in relation to such international obligations;
- to promote, encourage and regulate the harnessing, generation and use of all forms of energy;
- to encourage the use of alternative sources of energy and for such purpose in accordance with such regulations as may be prescribed, to impose levies on energy produced by non renewable sources and grant subsidies in connection with the production of energy from renewable sources;
- to secure that adequate provision and reserve stocks of petroleum and gas is available at all times;
- to regulate the distribution, sale, exportation or disposal in any other manner of fuels supplied for bunkering;

#### *5.2.4.2. Plant Health Department (PHD)*

The Plant Health Department is responsible for the plant health aspects of import and export arrangements applicable to plants and their propagation material, plant pests, plant produce and growing media entering Malta. This plant health work is performed as import and export controls of plants, plant products and their growing media at the points of entry into the Maltese Islands. The aim of this work is to prevent the spread and introduction primarily of quarantine pests of plant material and plant products but



also of pests and diseases affecting quality and to promote appropriate measures for their control. As an aid to this role, the Plant Health Department has diagnostic laboratories (Virology / Bacteriology / Mycology / Nematology / Entomology) that are equipped in carrying out tests that enable the identification of plant diseases. Control is not only done on goods introduced to Malta but also on local cultivation. Inspections are carried out at local nurseries and retail outlets for any presence of harmful organisms and also to determine whether these are complying with local and EU legislation. Plants and plant products are checked for plant passports and also checks are carried for the necessary documentation.

#### *5.2.4.3. Department of Agriculture*

The ultimate aim of the Agriculture Department is to assist local farmers and breeders to produce fresh products of the highest quality. The Department constantly tries to promote the introduction of improved methods of production in agriculture, horticulture and animal products. Special emphasis is made on the protection of the health of both the producer and the consumer and the safeguarding of the rural environment.

#### *5.2.4.4. WasteServ Malta Ltd.*

WasteServ Malta Ltd. is responsible for organizing, managing and operating integrated systems for waste management including integrated systems for minimisation, collection, transport, sorting, reuse, utilisation, recycling, treatment and disposal of solid and hazardous waste.

WasteServ Malta Ltd. operates integrated systems for export of waste to destinations outside the Maltese islands.

The company operates integrated systems for waste management in accordance to the Law of Malta. It is responsible for the implementation of waste management strategy and plan of the Government of Malta while observing internationally recognized waste management principles. The company acts as operator of last resort in the waste management sector.

### *5.2.5. Ministry of Education, Culture, Youth and Sport (MEDC)*

#### *5.2.5.1. University of Malta (UOM)*

The University today has eleven faculties: Arts; Built Environment; Dental Surgery; Economics, Management & Accountancy; Education; Engineering; Information & Communication Technology; Laws; Medicine & Surgery; Science and Theology.

A number of interdisciplinary institutes and centres have been set up in various fields. These include Agriculture, Anglo-Italian Studies, Baroque Studies, Criminology, Energy Technology, International Environment, Health Care, Islands and Small States, Linguistics, Maltese Studies, Public Administration & Management, Physical Education & Sport, Mediterranean Institute and Edward de Bono Institute for the Design & Development of Thinking.

The Centres comprise: Centre for Communication Technology, European Centre for Gerontology, European Centre of Educational Resilience & Socio-Emotional Health, Euro-Mediterranean Centre for Educational Research, Centre for Environmental Education and Research, Euro-Mediterranean Centre on Insular Coastal Dynamics, Centre for Family Studies, Centre for Labour Studies, Centre for Literacy and the European Documentation & Research Centre which incorporates the European Documentation Centre established to serve as a repository of European Community documents as well as a resource centre for students and the general public.

The Institute of Conservation and Management of Cultural Heritage (ICMCH), the teaching and research arm of Heritage Malta promotes and co-ordinates the pursuit of interdisciplinary training at professional, technical and craftsman levels in all aspects of conservation-restoration and management of cultural heritage. ICMCH makes use of Heritage Malta's Conservation Division's extensive facilities to provide courses including those leading to degrees conferred by the University of Malta.

#### *5.2.5.2. Malta College of Arts, Science and Technology (MCAST)*

The Malta College of Arts, Science and Technology (MCAST) is the main provider of all post-compulsory, post-16 vocational education and training in Malta and Gozo except for tourism studies and health care. Its mission is to provide universally accessible vocational and professional education and training with an international dimension, responsive to the need of the individual and the economy.

The Institutes that make up the College are the following: Institute of Art and Design; Community Services Institute; Maritime Institute; Institute of Information and Communications Technology; Institute of Mechanical Engineering; Agribusiness Institute; Institute of Electrical and Electronics Engineering; Institute of Business and Commerce; and Institute of Building and Construction Engineering.

#### *5.2.5.3. Institute of Tourism Studies (ITS)*

The Institute of Tourism Studies is an institution of higher education aimed at meeting the changing needs of the Hospitality and Tourism Industry. ITS seeks to identify and monitor customer needs and satisfaction and is responsible for providing the Hospitality Industry with personnel trained to international standards.

## 5.2.6. Ministry for Social Policy (MSOC)

### 5.2.6.1. *Department for Environmental Health (DEH)*

One of the Quality Service Chartered Departments within the Department for Environmental Health is the Health Inspectorate Services. The Health Inspectorate Services promotes and safeguards the well-being and health of the public.

The following are some of the services provided by the Health Inspectorate: enforcing Public Health laws and regulations through advice, education, persuasion and legal action if necessary; tackling complaints of nuisances such as infiltrations, leaking cesspits, accumulations of refuse, rubbish, debris, stagnant water and other issues related to environment; field monitoring of popular bathing areas including sampling of sea water; monitoring the quality of the public water supply from reservoirs, reverse osmosis plants, boreholes and various points through regular sampling; forwarding recommendations on applications submitted to the Malta Environment and Planning Authority, Malta Tourism Authority, Trade Licensing Unit, Police, Customs and Agriculture Department; inspection of food premises to ensure compliance with the Food Safety Act and other food regulations; monitoring of imported and exported foodstuffs; and dealing with various health hazards and taking remedial action for their abatement.

### 5.2.6.2. *Department of Health Information and Statistics (DHIS)*

The Department of Health Information and Research (DHIS) leads the collection, analysis and delivery of health related information in Malta. It provides high quality epidemiological information and indicators on the health of the population and health services. Health information is made available for policy and decision makers, for the public in general, interested institutions and others that may require it.

Research initiatives shall be developed and assistance shall be provided to the Director General (Strategy and Sustainability) by contributing the necessary evidence for the formulation of policy and strategy in the area of public health and health services for both existing and proposed programmes.

Data for all injuries attending the Emergency Department in Gozo is collected and in Malta, in the near future. Data collection occurs on a daily basis at Gozo General Hospital. The register relies on Accident and Injury Forms filled in by staff at the Emergency Department and sent to the registry.

The registry keeps named records in order to avoid duplicate registration and to allow the cross linkages with the Hospital Information Systems and the National Death Register.

### 5.2.6.3. *Occupational Health and Safety Authority (OHSA)*

The Occupational Health and Safety Authority (OHSA) maintain the levels of occupational health and safety protection as established by the regulations.

Under Act XXVII of 2000 the Authority has various functions, including to:

- advise the Minister responsible for occupational health and safety regarding the making of regulations to promote, maintain and protect a high level of occupational health and safety;
- monitor compliance with relevant occupational health and safety legislation and to take enforcement action;
- promote the dissemination of information regarding occupational health and safety, and the methods required to prevent occupational injury, ill health or death;
- promote education and training on occupational health and safety, and emergency and first aid response at work places;
- collate and analyse data and statistics on occupational injuries, ill health and deaths, and on matters ancillary to occupational health and safety;
- keep registers of such plant, installations, equipment, machinery, articles, substances, or chemicals and intended for use at work which in the opinion of the Authority provide a serious occupational health and safety risk; and
- promote and carry out scientific research aimed at better methods of preventing occupational ill health, injury, or death.

#### 5.2.7. Ministry of Finance, the Economy and Investment (MFEI)

##### 5.2.7.1. Customs Division

The overall aims of the Department are to collect the relevant revenues by minimising burdens for traders as economically, efficiently and effectively as possible. Customs are responsible for the control of imports and exports of goods, including chemicals.

The Customs Analyst's role is mainly assisting customs officers in the classification according to the combined nomenclature of goods that fall principally under the headings of chapters 1 to 40 of the same combined nomenclature. These can be grouped as animal and vegetable products, foodstuffs and chemicals. However, assistance is also given for other chapters, including textiles and instrumentation.

Imports are analysed when required for classification or taxation purposes. These can either be done in-house, or subcontracted to the MNL locally. Only tests for alcohol content for excise duties are usually carried out at customs however in the future the euromarker diesel tests are also going to be performed. When required, samples are sent to other specialised European customs laboratories.

##### 5.2.7.2. National Statistics Office (NSO)

The National Statistics Office (NSO) is governed by the Malta Statistics Authority Act, 2000. The NSO is the executive arm of the Malta Statistics Authority. It is responsible for the collection, compilation, analysis and publication of a wide range of statistical information and related matters. This does not prevent other government departments or institutions from collecting their own statistical data for internal purposes.

All information supplied to the National Statistics Office is treated as strictly confidential. This information is used solely in the compilation of statistical reports.

No information on individual returns can be given to any external public or private entity.

#### *5.2.7.3. Trade Services Directorate (TSD)*

The mission objectives of the Trade Services Directorate (TSD) within the Commerce Division are mainly to provide: a single window interface for the business community through the integration of major trade services; to re-engineer the processes of import and export licences, and streamline the internal trade licensing system; and to bring price regulation more in line with Community practices.

The importation of certain goods are subject to an authorisation or import licence issued by the Trade Services Directorate, in accordance with the Importation Control Regulations, 2004 (L.N. 242 of 2004). These goods are listed in the Schedules to these regulations:

The exportation of certain goods are also subject to an authorisation or export licence issued by the Trade Services Directorate, in accordance with the Exportation Control Regulations, 2004 (L.N. 243 of 2004).

#### *5.2.7.4. Malta Standards Authority (MSA)*

The Foodstuffs, Chemicals, Pesticides and Cosmetics Unit within the Regulatory Affairs Directorate (RAD) is responsible of the following sectors: food; chemicals; cosmetics; pesticides; batteries; fertilizers; textiles; footwear; crystal glass and detergents.

The RAD is the competent authority for the REACH and the CLP Regulations. The pesticides, which include the plant protection products, biocides and maximum residue levels, also fall under the remit of RAD.

#### *5.2.7.5 National Accreditation Board (Malta)*

The National Accreditation Board - Malta (NAB - MALTA) is operated as a Board under the responsibility of the Ministry Finance the Economy and Investment. Legal Notice 306 of 2007 has established the NAB-MALTA as the single nationally recognized accreditation body in Malta with the authority to give accreditation.

NAB-MALTA operates a management system in line with the requirements of MSA EN ISO/IEC 17011 (Conformity Assessment - General requirements for accreditation bodies accrediting conformity assessment bodies) and is an EA MLA signatory for testing. It is responsible for assessing and accrediting the competence of conformity assessment bodies in the field of calibration, testing, inspection, certification of management systems, products and personnel, and EMAS verifiers. The NAB-MALTA has also been designated as the competent authority with the responsibility for verifying compliance with the principles of Good Laboratory Practice of any testing laboratory in Malta claiming to use Good Laboratory Practice, as referred to in regulation 2(1) of L.N 371 of 2004, in the conduct of tests on chemicals.

Further information may be found at <http://www.nabmalta.org.mt/>.

## 5.2.8. Ministry for Justice and Home Affairs (MJHA)

### 5.2.8.1. *Civil Protection*

The Civil Protection Directorate (CPD) is responsible for the organisation of training courses and exercises for the civil population by simulating different disaster situations and those problems which can arise in such situations. One of the main objectives of this Department is the organisation of civil defence services by coordinating the capabilities and resources available to other Ministries and Department such as the Police, Armed Forces and the Health Authorities and to organise training courses and exercises in fire fighting, basic rescue and first aid.

## 6. Relevant Activities of Industry, Public Interest Groups and the Research Sector

### 6.1. Description of Organizations/Programmes

#### 6.1.1. Friends of the Earth (Malta)

The mission of the Friends of the Earth (FoE) is to be the human voice of the earth to bring about a peaceful, just, equitable and sustainable society, respectful of present and future generations by inspiring change and promoting solutions. The main aims of FoE are the following:

- To engage in vibrant campaigns, raise awareness, and mobilise people to participate actively in public decision making in order to promote the Mission, Principles and Aims of the Organisation;
- To develop creative solutions based on sound knowledge and information, promoting alternatives to environmentally harmful behaviours;
- To lobby, mobilise and influence the policy community towards a more equitable and sustainable society;
- To strive for continual improvement of its activities and organisational capacity; and
- To co-operate with other like-minded local and international organisations, particularly FoE International and other FoE Groups, in order to fulfil its Mission, Principles and Aims.

The main areas of interest of FoE are Waste, Water, Climate, Social Justice, Land Use, Chemicals and Food.

FoE usually collects data locally and from the information material provided by FoE Europe and International. They also carry out risk assessment through data analysis and thus can form opinions on the assessments. The policies and research on alternatives are analysed in collaboration with other FoE groups. The FoE members receive training and education in Malta but also abroad.

#### 6.1.2. Pharmaceutical Manufacturing Group

The rapid developments in the regulatory and legal framework, which govern the operations of the pharmaceutical manufacturing sector, stimulated the collective participation of each pharmaceutical manufacturer into one group. Thus, in April 2003, the Federation Of Industry Sector Group was officially established.

The Pharmaceutical Manufacturing Business Sector of the Malta Chamber of Commerce, Enterprise and Industry (MCCEI) was originally established under the Federation of Industry; it currently consists of twelve member companies representing various aspects of pharmaceutical manufacturing in Malta. In the past, the Sector Group has been actively involved in the consultation process regarding the drafting of legislation under the Medicines Act, aimed at implementing European Union directives into national legislation. Furthermore the Sector Group had also participated in a number of working groups concerning the implementation of a National Medicines Policy and at assessing the impact of the upcoming EU REACH legislation on local

industry. The Sector Group has also worked closely with other organisations in addressing professional and training issues of human resources employed in this Sector. More recently the group was tackling the issue on management of hazardous waste.

The ultimate scopes of the Pharmaceutical Manufacturing group are the following:

- Assuring an investment in the infrastructural requirements of the sector to guarantee the expansion of the sector and an increase in its contribution to the local economy;
- Efforts, in collaboration with Malta Enterprise, MCST and the University of Malta to attract researchers, raise awareness of local technologies, and instil a research mentality in our human resources; and
- Promote the Malta-based pharmaceutical manufacturing industry in international spheres so as to stimulate international collaborations, increasing technology transfers to Malta and thus improving the international profile of this pharmaceutical manufacturing sector.

## 6.2. Assessment and Comments

The non-governmental organizations (NGOs) are kept informed with the management of chemicals by the respective competent authorities. Information is usually submitted by and to the competent authorities involved in the management of chemicals. Certain issues that need to be tackled by different authorities are usually discussed in special committees, such as the E-REACH Committee and the IPPC Committee, where NGOs can voice their opinions during such meetings.



## 7. Inter-ministerial Commissions and Coordinating Mechanisms

### 7.1. Overview Inter-ministerial Commissions and Co-ordinating Mechanisms

*Table 7.A: Overview of Inter-ministerial Commissions and Co-ordinating Mechanisms*

Name of Mechanism	Secretariat	Chaired	Members	Legislation
E-REACH Committee	MSA - RAD	MSA - RAD	MEPA DEH CD MSD OHSa	L.N. 207/2008 - PSA - Registration, Evaluation, Authorisation and Restriction of Chemicals Enforcement (E-REACH) Committee Regulations, 2008
Pesticides Control Board	MSA-RAD	OPM - MEPA	Farmers' Representative MEPA MSA OHSa DA DEH MEDC MRA PHD	Chapter 430 Pesticides Control Act
Civil Protection Scientific Committee	CPD	CPD	UOM <i>(Faculty of Architecture; Faculty of Mechanical Engineering; Department of Physics; Department of Chemistry; Department of Pharmacy; )</i> Oil Exploration Department; DEH; MCST; Malta Red Cross Society; Works Department; Department of Education; MEPA; OHSa	Chapter 411 Civil Protection Act  (Paragraph 2 of Article 6)

Name of Mechanism	Secretariat	Chaired	Members	Legislation
Integrated Pollution Prevention and Control Committee (IPPC)	Dr Anthony Galea	MEPA	MEPA DEH OHS MMA Police	The IPPC Committee is legally constituted through Schedule 6 of LN 234/2002. The committee oversees the definitive establishment of IPPC installations, the inspection of installations and ensures that the necessary guidance in the legislation is carried out.
Radiation Protection Board	OHS	OHS	DEH MEPA (EPD) CPD	Nuclear Safety and Radiation Protection Regulations 2003
COMAH Competent Authority (CCA)	OHS	OHS	MEPA CPD	L.N. 37/2003 Control of Major Accidents Regulations
Building Industry Consultative Council (BICC)	OHS	Perit John Ebejer	MRA MEPA OHS MCAST Works Division UOM GRTU MSA MCCEI Etc.	Discusses issues concerning the building industry such as the building regulations, construction products, licensing of masons, etc.
Consumer Affairs Council (CAC)	Public officer appointed by MFEI	Chairman appointed by MFEI	Director of Consumer Affairs - ex-officio Deputy Chairperson; One member representing the Traders; One member representing Consumer Associations; Three members appointed by MFEI on the basis of their knowledge in this sector	Article 5 of the Consumer Affairs Act (Chapter 378)

## 7.2. Description of Inter-ministerial Commissions and Co-ordinating Mechanisms

### 7.2.1. E-REACH Committee

The main responsibilities of the Registration, Evaluation, Authorisation and Restrictions of Chemicals Enforcement (E-REACH) Committee include the following:

- The monitoring and coordination of enforcement of REACH and any other relevant legislation, standards and practices in relation to chemical operations, chemical premises and actors in the supply chain operating in the chemical sector;
- Formulate and implement policies and strategies with short-term and long-term objectives, in relation to all matters relating to chemicals, including the development of a national surveillance and enforcement plan for chemical safety and to ensure the effective, transparent and comprehensive implementation of such plan;
- Carry out studies, research or investigation on any matter relating to the usage of chemicals within the scope of the REACH and for such purposes shall require the submission of any information and shall analyse and interpret any data or information submitted to it;
- Ensure that proper records and registers are kept to ensure the persons responsible for any chemical may be identified;
- Propose and advise upon the appropriate legal and administrative framework to implement REACH;
- Management of chemicals affecting the environment, human health and safety;
- Gathering of information from actors in the supply chain;
- Evaluating the risks of chemicals without prejudice to other provisions adopted; and
- Setting up an information system on chemicals and the protection of health and the environment.

The E-REACH Committee provides the necessary communication and co-ordination platform for the different entities involved in managing chemicals and this provides the optimum mechanism to optimise the use of the availability of resources. In order to improve the operations of the committee there is a need to create greater awareness on the existence and the work of the committee through information dissemination mechanisms such as the development of a website and there is the need to make available a greater amount of human resources to drive the work of the committee. The importance of the E-REACH will become greater as the work under the REACH regulation continues to increase as time goes by.

### 7.2.2. Pesticides Control Board

The Pesticides Control Board is responsible for advising the Director of RAD established under MSA, on any matter relating to the registration, restriction, importation, manufacture, sale or use of pesticides including those employed in integrated control management. The board must also report to the Director on any matter relating to the regulating, enforcing and monitoring of all legislation relating to pesticides or on any matter regarding pesticides.

The Pesticides Control Board advises on measures to be taken on any matter arising from the application of any regulations made under the Pesticides Control Act (PCA), reviews and makes proposals for revision of existing legislation relating to pesticides.

According to the PCA, the Pesticides Board comprises of:

- a Chairman to be appointed by the Minister;
- four members, to be appointed by the Minister, at least one of whom shall be a farmers' representative;
- the Director of RAD established under MSA, or his representative; and
- a representative from the educational sector, and a representative from each of the Public Health Department, the Department of Environment, the Plant Health Department, the Occupational Health and Safety Authority and the Water Services Corporation.

#### 7.2.3. Civil Protection Scientific Committee

The Committee gives advice to the CPD on different matters and emergencies that may arise from time to time. This committee meets only when important issues need to be discussed.

#### 7.2.4. Integrated Pollution Prevention and Control Committee (IPPC)

The IPPC Committee is established by virtue of L.N. 234 / 2002 of the Environment Act. It is chaired by the Pollution Prevention Control Unit of MEPA. The committee oversees the definitive establishment of IPPC installations, the inspection of installations and ensures that the necessary guidance in the legislation is followed. The ultimate aim of the IPPC is to minimise pollution from various point sources. All installations falling under the relevant legal notice will be required to obtain an authorisation (permit) from MEPA. As Integrated Pollution Prevention is a multi-disciplinary task a Committee to deal with the regulatory aspect of the Regulations was set up.

#### 7.2.5. Biosafety Co-ordinating Committee (BCC)

The aim of the Biosafety Co-ordinating Committee (BCC) is to achieve an integrated approach on Biosafety, the contained use of genetically modified micro organisms, the deliberate release into the environment of genetically modified organisms and the placing on the market of genetically modified organisms, in order to achieve a high level of protection of human health and the environment taken as a whole. The main function of the BCC is to give statutory advice to the board of MEPA on the risks to human health and the environment from the release and marketing of GMOs.

The OHSA does not carry out any inspections related to biosafety, but should resources be made available, the Authority will be in a position to carry out inspections related to contained use of GMOs together with MEPA. There have already been preliminary discussions on setting up a memorandum of understanding between these two entities in order to define roles and responsibilities if joint inspections are to be carried out.

### 7.2.6. Radiation Protection Board

The Radiation Protection Board was set up by the Prime Minister by virtue of the Nuclear Safety and Radiation Protection Regulations 2003. The Radiation Protection Board has the responsibility for all aspects of the regulatory control of ionizing radiation and advising on nuclear issues. The Radiation Protection Board is chaired by the OHSa and has members from OHSa, Public Health, Environment Protection Directorate (within MEPA) and Civil Protection Department. New members for Public Health and MEPA have been appointed and the other members re-appointed.

### 7.2.7. COMAH Competent Authority (CCA)

Ten COMAH establishments have been identified in Malta, six of which are upper tier sites. The establishments are all designated as COMAH sites due to the type and quantity of fuels stored at the facilities.

List of COMAH establishments
Delimara Power Station, Marsaxlokk
Has Saptan Installation, l/o Ghaxaq
Ras Hanzir Installation, Paola
31st March 1979 Installation, Birzebbuga
Oil Tanking Malta, Birzebbuga
Qajjenza LPG Plant, Birzebbuga
Wied Dalam Installation, l/o Birzebbuga
Mediterranean Offshore Bunkering Co. Ltd., Marsa
San Lucian Oil Co. Ltd., Birzebbuga
LPG Storage Depot, San Lawrenz, Gozo

It is planned that one of the sites - the LPG storage and bottling plant at Qajjenza - will be decommissioned and replaced by a new site in Bengħajsa.

Competence for the COMAH Regulations, enacted under the Occupational Health and Safety Authority Act, is shared between the Occupational Health and Safety Authority (OHSa), the Environment Protection Directorate within MEPA, and the Civil Protection Department (CPD), with OHSa taking the lead in co-ordinating the administrative actions of the COMAH Competent Authority.

Operators of facilities that come within scope of the COMAH regulations because of the type and quantity of chemicals that are stored, handled or produced at the facility, are obliged to notify OHSa and submit the information required by the legislation within specific timeframes. The notification forms are available on the OHSa website (<http://www.ohsa.org.mt/showpage.asp?pageid=113>).

The COMAH CA monitors the fulfilment of the operators' obligations under the legislation and the management of the sites in relation to the prevention of major accidents and emergency planning.

"The land-use planning requirements of the Seveso legislation are addressed through the Development Control process guided by MEPA's Supplementary Planning Guidance

on Major Accident Hazards and Hazardous Substances, which also directs the type of development that is allowed in the vicinity of these establishments. Consultation zones have been drawn up around those sites in Malta which pose an immediate risk in the event of a major chemical accident, on the basis of risk criteria. Development within these zones is limited by the zone boundaries (inner, middle and outer) and the type and purpose of the proposed development, as well as its level of sensitivity. "

Given the nature of their activities and their coastal location, most of the sites also fall within the regulatory competence of the Malta Resources Authority and the Malta Maritime Authority.

#### **7.2.8. Building Industry Consultative Council (BICC)**

The BICC was set up by the Government to ameliorate the performance of the local construction industry and publishes various guidelines for the construction industry. Following the recent reappointment of the BICC, the OHSa has nominated its members on this Council to represent the interests of OHS in such an important forum.

## 8. Information Management Capacity, Data Access, and Use

### 8.1. Overall Availability of Data for National Chemicals and Related Waste Management

*Table 8.A.1: Sufficiency (in Quality and Quantity) of Available Information concerning Pesticides<sup>34</sup>*

Data concerning Pesticides needed for/to:	
Assess Chemicals Impact under Local Conditions	A European Directive on the Sustainable Use of Pesticides is going to be published in the year 2010. With this Directive in place, MSA have to start consultations with MRA on the assessment of groundwater. In the meantime MEPA are performing tests on surface water. The DA had to carry out soil testing for pesticide residues, however to date they did not manage to collect the samples.
Risk Assessment (Environment/ Health)	Mainly based on studies carried on surface water; no information available related to human health
Classification/ Labelling	X
Registration	X
Licensing	X (Farmers' Licence)
Permitting	In the year 2010 MSA is to issue permits to persons responsible for selling PPPs
Risk Reduction Decisions	The classification of new PPPs are according to the current regulations; the other PPPs are in the process to become updated
Accident Preparedness/ Response	MSA has access to the dossier of each active substance which is included in Annex I of the PPP regulations; however the emergency response services, within the local hospitals, do not have direct access to the information on the product composition.
Poisoning Control	Adequate labelling of PPPs since they must follow the current regulations; The Medicines & Poisons Information at MDH can be considered as the point of reference as regards information which could be used in the management of poisonings. Thus such information should be directed to this Section within MDH. This will greatly help in the management of eventual poisonings as well as enable the identification of antidotes required for the treatment of poisonings with PPP.
Inspections & Audits (Environment/ Health)	MSA perform inspections and checks the pesticides being used by farmers, the use of PPEs and how pesticides are being disposed of
Information to Workers	Seminars targeted to farmers are organised by MSA
Information to the Public	General Information, including risk related issues concerning environmental and human health, is available on the MSA website

<sup>34</sup> "X" denotes whether there is sufficient information available for the tasks listed the left hand column

**Table 8.A.2: Sufficiency (in Quality and Quantity) of Available Information concerning Petroleum Products<sup>35</sup>**

Data concerning Petroleum Products needed for/to:	
Assess Chemicals Impact under Local Conditions	<p>MRA is responsible to collect and test fuel samples. Fuel quality data is collected and reported as per regulations defined in LN 44/2008 (Quality of Fuel Regulations, 2008). These regulations require the monitoring of fuel quality and the submission of subsequent reports as defined by Directive 2003/17/EC (relating to the quality of petrol and diesel fuels - Land Based Fuel Quality) and Directive 2005/33/EC (relating to Marine Based Fuel Quality)</p> <p>It is noted that this regulation came into force in August 2009 and will repeal regulations in LN 222/2001 and 159/2002.</p>
Risk Assessment (Environment/ Health)	<p>APEA Petrol Station Survey (2006)</p> <p>Petrol Station Surveys are currently being carried out by consultants in collaboration with Authority and the Ministry (2009)</p>
Classification/ Labelling	Petrol Stations are required to clearly label the fuel dispensers
Licensing	<p>MRA licenses the following operators:</p> <ul style="list-style-type: none"> <li>• Importers and/or wholesalers of petroleum products</li> <li>• Petrol stations and Kerbside Pumps</li> <li>• Jobbers and Kerosene Hawkers</li> <li>• LPG</li> <li>• Bulk LPG Cylinder distributors</li> <li>• LPG fixed pipe network</li> <li>• Operation of a secondary storage facility of LPG</li> <li>• LPG cylinders retail activity of portable cylinders filled with LPG, including retail from a fixed point of sale</li> <li>• Operation of Autogas Retail Station</li> <li>• Bunker Operators</li> </ul>
Risk Reduction Decisions	As applicable under REACH Regulation (EC) 1907/2006
Accident Preparedness/ Response	Close Coordination with CPD and OHSA, as required also under COMAH regulations.
Inspections & Audits (Environment/ Health)	<p>Currently the MRA conducts inspections at Petrol Stations to check on their fuel quality.</p> <p>Inspections of other nature are still in the planning stage.</p>
Information to Workers	A petrol station operator course was conducted by the MRA. An LPG competent person course will be organised by the MRA and attended by warranted engineers willing to work in the LPG field.
Information to the Public	Upcoming LPG educational campaign by the MRA in conjunction with Enemalta

<sup>35</sup> "x" denotes whether there is sufficient information available for the tasks listed the left hand column



**Table 8.A.3: Sufficiency (in Quality and Quantity) of Available Information concerning other chemicals<sup>36</sup>**

Data concerning other chemicals substances and mixtures (within the scope of REACH) needed for/to:	
Assess Chemicals Impact under Local Conditions	MEPA is going to embark on an environmental monitoring project whereby information on air, water, and eventually soil, is going to be collected and used for the baselines in Environment Impact Assessments. The following chemicals need to be monitored: PCBs; Dioxins; etc. The next step in line will be biomonitoring so as to be able to gather information for exposure studies.
Risk Assessment (Environment/ Health)	X
Classification/ Labelling	X
Registration	X
Licensing	N/A
Permitting	The aim of the Integrated Pollution Prevention and Control (IPPC) Regulations is to minimise pollution from various point sources. All installations falling under Schedule 1 of the IPPC Regulations (LN 234 of 2002 as amended by LN 230 of 2004) will be required to obtain an authorisation (permit) from MEPA to be allowed to operate. <i>Integrated</i> means that the permits must take into account the whole environmental performance of the plant, i.e. emissions to air, water and land, generation of waste, use of raw materials, energy efficiency, noise, prevention of accidents, risk management, etc.
Risk Reduction Decisions	REACH Registration calls upon manufacturers and importers of chemicals (of 1 tonne of more per annum) to collect required information on chemicals. This information allows for safe use of chemicals as well as for drafting risk reduction measures.
Accident Preparedness/ Response	As in the case of pesticides, even though information is readily available from the safety data sheets of the individual substances/mixtures, the emergency response team does not have direct access to the information on the product composition.

<sup>36</sup> "X" denotes whether there is sufficient information available for the tasks listed the left hand column

Data concerning other chemicals substances and mixtures <i>(within the scope of REACH)</i> needed for/to:	
Poisoning Control	There is adequate labelling according to the CLP regulation and information is readily available from the safety data sheets of the substances/mixtures; Although there is no official poison centre, the Medicines & Poisons Information can be considered as the point of reference as regards information which could be used in the management of poisonings. Such information should be directed to MDH so as to help in the management of eventual poisonings.
Emissions Inventories	MEPA holds information on the release of emissions as per the E-PRTR Regulation, EC 166/2006; the register contains information on releases of pollutants to air, water and land, as well as transfers of waste and pollutants, where emissions exceed certain threshold values and result from specific activities.
Inspections & Audits (Environment/ Health)	X
Information to Workers	X
Information to the Public	X

## 8.2. Sources of National Data and their Access and Format

*Table 8.B: Sources of National Data and their Access and Format*

Type of Data	Location/s	Data Source	Who Has Access?	How to Gain Access	Format
Production Statistics	NSO	Custom declarations; Import/Export Licences; Intrastat	Public	At request, on the website: <a href="http://www.nso.gov.mt/site/page.aspx">http://www.nso.gov.mt/site/page.aspx</a> (possibly liable to charge)	Excel tables; Pdf-files
Import Statistics					
Export Statistics					
Chemical Use Statistics					
Accident Reports	NSO DHIS	Filled questionnaires by Doctors and/or Nurses; Reports entered into the Police Reporting System	Restricted	At request	Excel tables; Pdf-files
Pollutant Release and Transfer Register	MEPA	E-PRTR Directive	Public	MEPA website: <a href="http://www.mepa.org.mt">www.mepa.org.mt</a>	Pdf-file
List of Approved Plant Protection Products	MSA	EU Decisions	Public	MSA website: <a href="http://www.msa.org.mt/rad/pesticides/index.htm#PPP">http://www.msa.org.mt/rad/pesticides/index.htm#PPP</a>	Pdf-files
List of Revoked Plant Protection Products	MSA	EU Decisions	Public	MSA website: <a href="http://www.msa.org.mt/rad/pesticides/index.htm#PPP">http://www.msa.org.mt/rad/pesticides/index.htm#PPP</a>	Pdf-files
Register of Imports/Exports	CD TSD	Declarations by the importers; Import/Export Licences	Restricted	At request (possibly liable to charge)	Excel tables

### 8.3. Procedures for Collecting and Disseminating National Data

#### 8.3.1. Chemical Data Type

The manufacturer, importer, distributor or the responsible person for placing a chemical on the market is responsible for providing the user the data necessary for safe handling of the chemical.

By means of the REACH Regulations manufacturers and importers of chemical substances ( $\geq 1$  tonne/year) have to obtain information on the physicochemical, health and environmental properties of their substances and use it to determine how these substances can be used safely. Each manufacturer and importer must submit a registration dossier documenting the data and assessments to the ECHA.

Regarding chemical imports, licences are required in the case of chemicals and chemical preparations, pharmaceuticals, detergents, pyrotechnics, textiles, steel, and weapons. Regarding exports, the present list includes also the petroleum products. In addition, exports of dual-use items and military equipment also require an export licence. These licences are issued by the Trade Services Directorate. The import or export licence must include the name and address of the importer or exporter, the country of origin, the exporting country or the country of destination, the description of the item being imported or exported, the quantity of the item and the HS Code. The Customs Department is the competent authority for the classification of the items according to the HS Code.

Furthermore to imports and exports the Customs Division holds a database with all the information concerning the identity of the importer/exporter, and the identity of the substance including the quantity, HS code and the country of origin. All this information is disseminated to the National Statistics Office whereby it is combined with the information collected from the Intrastat.

#### 8.3.2. Aarhus Convention - the Right to obtain Environmental Information

With the purpose of strengthening environmental democracy and improving the implementation of the public's environmental rights, the Malta Environment & Planning Authority (MEPA) and the Austrian Environment Agency (Umweltbundesamt) have compiled tailored guidelines on the rights and obligations related to the Aarhus Convention. These guidelines offer practical and tailored advice for the public to ensure that public authorities are accountable for environmental decisions.

These guidelines clearly inform these stakeholders on their right to obtain environmental information, to participate in environmental decision-making and to access mechanisms of judicial redress in environmental matters, should their rights be violated. Amongst other things the guidelines discuss what environmental information can be requested by the public, and how it is to be made available by public authorities. They also inform the public what information cannot be disclosed, as per the provisions of the Convention and related EU and national legislation.

MEPA is the focal point for the implementation of the Aarhus Convention in Malta and all requests for environmental information, even from other public authorities should be addressed to MEPA.

#### 8.4. Availability of International Literature and Databases

*Table 8.C.1: Availability of International Literature*

Literature	Location(s)	Who Has Access?	How to Gain Access
Environmental Health Criteria Documents (WHO)	Internet	Unlimited	<a href="http://www.who.int/ipcs/publications/ehc/en/">http://www.who.int/ipcs/publications/ehc/en/</a>
Health and Safety Guides (WHO)	Internet	Unlimited	<a href="http://www.inchem.org/pages/hsg.html">http://www.inchem.org/pages/hsg.html</a>
International Chemical Safety Data Cards (IPCS/EC)	Internet	Unlimited	<a href="http://www.cdc.gov/niosh/ipcs/ipcs-card.html">http://www.cdc.gov/niosh/ipcs/ipcs-card.html</a>
Decision Guidance Documents for PIC Chemicals (FAO/UNEP)	Internet	Unlimited	<a href="http://www.pic.int/home.php?type=s&amp;id=30&amp;sid=30">http://www.pic.int/home.php?type=s&amp;id=30&amp;sid=30</a>
FAO/WHO Pesticides Safety Data Sheets	Internet	Unlimited	<a href="http://www.inchem.org/pages/pds.html">http://www.inchem.org/pages/pds.html</a>
Documents from the FAO/WHO Joint Meeting on Pesticide Residues	Internet	Unlimited	<a href="http://www.inchem.org/pages/jmpr.html">http://www.inchem.org/pages/jmpr.html</a>
Material Safety Data Sheets (industry)	Internet	Unlimited	<a href="http://www.ilpi.com/msds/">http://www.ilpi.com/msds/</a>
OECD Guidelines for the Testing of Chemicals	Internet	Unlimited	<a href="http://titania.sourceoecd.org/vl=1421976/cl=16/nw=1/rpsv/periodical/p15_about.htm?jnlissn=1607310x">http://titania.sourceoecd.org/vl=1421976/cl=16/nw=1/rpsv/periodical/p15_about.htm?jnlissn=1607310x</a>
Good Laboratory Practice Principles	Internet	Unlimited	<a href="http://ec.europa.eu/enterprise/sectors/chemicals/documents/classification/laboratory-practice/index_en.htm">http://ec.europa.eu/enterprise/sectors/chemicals/documents/classification/laboratory-practice/index_en.htm</a>
Good Manufacturing Practice Principles	Internet	Unlimited	<a href="http://ec.europa.eu/enterprise/pharmaceuticals/eudralex/vol4_en.htm">http://ec.europa.eu/enterprise/pharmaceuticals/eudralex/vol4_en.htm</a>

*Table 8.C.2: Availability of International Databases*

Database	Location(s)	Who Has Access?	How to Gain Access
IRPTC: International Register of Potentially Toxic Chemicals	Internet	Unlimited	<a href="http://www.chem.unep.ch/irptc/irptc/databank.html">http://www.chem.unep.ch/irptc/irptc/databank.html</a>
ILO CIS: International Labour Organization-International Occupational Safety and Health Information System	Internet	Unlimited	<a href="http://www.ilo.org/public/english/protction/safework/cis/products/cisinst.htm">http://www.ilo.org/public/english/protction/safework/cis/products/cisinst.htm</a>
IPCS INTOX: International Programme on Chemical Safety-Poisoning Prevention and Management	Internet	Unlimited	<a href="http://www.who.int/ipcs/poisons/intox/en/index.html">http://www.who.int/ipcs/poisons/intox/en/index.html</a>
CAS Database: Chemical Abstract Services Database	Internet	Unlimited	<a href="http://www.cas.org/expertise/cascontent/index.html">http://www.cas.org/expertise/cascontent/index.html</a>
GINC: Global Information Network on Chemicals	Internet	Unlimited	<a href="http://www.nihs.go.jp/GINC/index.html">http://www.nihs.go.jp/GINC/index.html</a>
STN Database: Scientific and Technical Information Network, US Chemical Abstract Service	Internet	Unlimited	<a href="http://www.cas.org/support/stngen/dbss/">http://www.cas.org/support/stngen/dbss/</a>

At the Library of the University of Malta all the students and lecturers have direct access to various resources and journals. To access the latter a list of databases are available according to various subjects. Table 8.C.2 gives a list of databases that can be used.

*Table 8.C.3: List of Databases available at the University of Malta*

Database Title	Description
<a href="#">Academic Search Complete</a> (Campus Access Only)	The database features PDF content going back as far as 1865, with the majority of full text titles in native (searchable) PDF format. Searchable cited references are provided for nearly 1,000 journals.
<a href="#">AGRICOLA</a>	AGRICOLA (AGRICultural OnLine Access) serves as the catalog and index to the collections of the National Agricultural Library, as well as a primary public source for world-wide access to agricultural information.
<a href="#">ArticleFinder</a>	ArticleFinder contains over 26 million citations of scientific, technical, and medical content with additional resources for business, law and the humanities. Full-text articles may be ordered for a fee.
<a href="#">ASFA: Aquatic Sciences and Fisheries Abstracts</a> (Campus Access Only)	Overwhelmingly cited by a majority of aquatic science librarians as their primary database, the ASFA series is the premier reference in the field of aquatic resources.
<a href="#">Avano</a>	Avano: Marine and Aquatic Sciences Harvester - Avano offers access to electronic resources about aquaculture, marine biology, fisheries, water pollution and a range of other topics.
<a href="#">Biological Sciences</a> (Campus Access Only)	This interdisciplinary database offers abstracts and citations to a wide range of research in biomedicine, biotechnology, zoology and ecology, and some aspects of agriculture and veterinary science. Supporting over two dozen areas

Database Title	Description
	of expertise, this CSA database provides access to literature from over 6,000 serials, as well as conference proceedings, technical reports, monographs and selected books and patents.
<a href="#">BioMed Central</a>	This database provides full-text peer reviewed articles pertaining to medicine and science.
<a href="#">Directory of Open Access Journals</a>	The Directory of Open Access Journals (DOAJ) covers free, full text, quality controlled scientific and scholarly journals.
<a href="#">Electronic Journals Service (EJS)</a> (Campus Access Only)	Electronic Journals Service (EJS) is a customized package containing over 300 journals online. It provides full-text access to the collection of electronic journals for which the University of Malta Library also holds the companion print versions.
<a href="#">Environmental Sciences and Pollution Mgmt</a> (Campus Access Only)	This multidisciplinary database, provides unparalleled and comprehensive coverage of the environmental sciences.
<a href="#">EUR-Lex</a>	EUR-Lex provides direct free access to European Union law. The system makes it possible to consult the Official Journal of the European Union and includes, among other material treaties, legislation, case law and legislative proposals.
<a href="#">Europa - Gateway to the European Union</a>	Europa is the portal site of the European Union. It provides up-to-date coverage of European Union affairs and essential information on European integration. Users can consult all legislation currently in force or under discussion, access the websites of each of the EU institutions and find out about the policies administered by the European Union under the powers devolved on it by the Treaties.
<a href="#">GreenFILE</a> (Campus Access Only)	GreenFILE offers well-researched information covering all aspects of the human impact upon the environment.
<a href="#">IngentaConnect</a>	IngentaConnect provides online access to 30,022 multi-disciplinary scholarly publications. Patrons may access full-text articles, for those online journals found at the University of Malta Library. In cases where library subscriptions do not exist, coverage is restricted to abstracts of articles, but users may purchase articles on a pay-per-view basis.
<a href="#">Laws of Malta</a>	The LAWS OF MALTA website is one of the services offered by the Ministry for Justice and Home Affairs. This service brings together a collection of all the Laws of Malta, including the Constitution, the Statute Law Revision Act, 1980 and subsidiary legislation. This government service is provided free of charge, has unlimited use and presents no fees whatsoever to download copies of all the Laws of Malta in pdf format.
<a href="#">Web Portal</a>	The United Nations Educational, Scientific and Cultural Organization (UNESCO) functions as an agency for education, the sciences, culture and communication.
<a href="#">Water Resources Abstracts</a> (Campus Access Only)	Water Resources Abstracts provides summaries of the world's technical and scientific literature on water-related topics covering the characteristics, conservation, control, pollution, treatment, use and management of water resources.

#### 8.5. Government Information Systems, Informatics Technology Capacity, and the Exchange of Information

All ministries and institutions concerned with the different aspects of life cycle chemicals management have informatics capabilities. Each institution that deals with chemicals has its own official website. Information on legislation, guidance documents, press releases, frequently asked questions and other relevant information can be accessed through these websites.

The computer information systems in different ministries and other governmental institutions are compatible. All the administrative and technical staff has the ability to access E-mail and the Internet.

The Malta Information Technology Agency (MITA) operates the Malta Government Network (also known as the MAGNET) which is the wide area network that interconnects Public Service and Public Sector Organisations. Besides supporting this network, MITA also provides support of the various Local Area Networks used by these organisations for their own intranet connectivity and support of their own internal Information and Communications Technology (ICT) operations. MITA also provides a corporate Electronic Mail (e-Mail) Service to the Public Sector, as well as to students and teachers of state schools. The service is a store and forward method of composing, sending, receiving and storing messages over electronic communication systems. Furthermore MITA provides internet browsing services to the Public Sector. MITA provides access to the Internet through one of the specific wide area connectivity services. The service is not metered and generally has no download limit.

Concerning the exchange and flow of EU-related information the concerned parties are kept up-to-date by the EU Affairs Directorate. In order to facilitate and enhance Malta's new role as a Member State of the EU, the Maltese Government appointed a director of EU Affairs in each Ministry. Each EU Affairs Director is responsible for the monitoring of draft EU laws and the drafting of Malta's position on each of these proposed laws. The EU Affairs Directors are members of the Inter-Ministerial Committee which is presided by Malta's Permanent Representative to the European Union, Ambassador Richard Cachia Caruana. The Inter-Ministerial Committee checks all draft position papers on draft EU legislation before they are passed on to the Minister concerned, and eventually to the Cabinet of Ministers. Consultation with social partners was also strengthened by the Consultative Meeting on EU Affairs (COMEU) presided by the Minister of Foreign Affairs, Dr Michael Frendo. Information sessions for NGOs on draft EU laws are organised by Forum Malta fl -Ewropa.

The exchange of national information among various ministries and other institutions and other concerned parties mainly occurs via email or by phone.



## 8.6. Assessment and Comments

Currently in Malta there are no existing chemical data bases, except for data on solvents and on greenhouse gases, however, ECHA is building up a database with the information on hazardous chemicals concerning classification as well as registration of substances, manufactured and/or imported in quantities  $\geq 1$  tonne.

Information on the Plant Protection products and Biocidal products that are being sold in Malta is available. As from 2009, records on the quantities of the imported pesticides are also being requested.

The possibility of creating a notification mechanism that would enable the tracking of substances and mixtures being placed on the local market (irrespective of the tonnage and origin) is being investigated.

## 9. Technical Infrastructure

### 9.1. Overview of Laboratory Capacity

*Table 9.A: Overview of Laboratory Infrastructure for Regulatory Chemical Analysis and for Monitoring and Analysis*

Name/ Description of Laboratory	Location	Equipment/ Analytical Capabilities Available	Accreditation	Certified GLP	Purpose
Public Health Laboratory (PHL) is a food and environmental testing laboratory. It is nominated National Reference Laboratory for seventeen areas, ten of which concern chemical parameters. The PHL has agreements with renowned national laboratory organizations from other Member States for technical assistance.	Public Health Laboratory (PHL), Evans Building, Valletta	AAS (Flame, Electrothermal, Cold vapour, warm vapour facilities HPLC systems (UV/VIS PDA, UV, Flu, EC, GP setups) Extraction / Concentration systems (Soxhlet, ASPE, N <sub>2</sub> concentrator, centrifuges, etc) GC systems (FID, TSD, ECD, PFPD, MS) ELISA setup BIACORE setup Gamma spectrometer, Portable radiation meters. Microbiological testing facilities	PHL is accredited to ISO/IEC 17025, by NAB-Malta for various biological parameters and is presently in the process of extending the scope of accreditation to include chemical parameters also.	No	Testing of parameters of Public Health concern (biological, chemical, radiation). Official food testing. National Reference Laboratory for various trace contaminants (e.g. pesticide residues, mycotoxins and heavy metals). Others (e.g. compositional analysis of food)
Diagnostic (virology / bacteriology)	Plant Biotechnology Centre, Lija	Microscopes, incubators, laminar workstations, thermocyclers, thermoblocks, etc.	No	No	Diagnosis of plant quarantine organisms
Diagnostic (mycology / nematology / entomology)	Rural Affairs Laboratory, Għammieri, Marsa	Microscopes, incubators, laminar workstations, ELISA setup, thermocyclers, thermoblocks, etc.	No	No	Diagnosis of harmful organisms that are a threat to agriculture

Name/ Description of Laboratory	Location	Equipment/ Analytical Capabilities Available	Accreditation	Certified GLP	Purpose
Tissue culture	Plant Biotechnology Centre, Lija	Laminar flow workstations, sterilizers, cold chambers, growth chambers, etc.	No	No	Propagation of plants by <i>in vitro</i> techniques to produce virus-free plants or for conservation of endangered plants and the sanitation of local varieties of endangered fruit tree species
Soil and irrigation water (chemistry)	Rural Affairs Laboratory, Għammieri, Marsa	Atomic absorption spectrophotometer, centrifuge, fume cabinets, hydrometer, Kjeldahl apparatus, etc.	No	No	Testing of soil and irrigation water for advisory purposes mainly in relation to irrigation and fertilisation
Oenology (at the moment not functional, being relocated)	Rural Affairs Laboratory, Għammieri, Marsa	Wine analyzer, microscopes, wine distillers, HPLC system, UV-VIS spectrophotometer, etc.	No	No	Analysis of wines

Name/ Description of Laboratory	Location	Equipment/ Analytical Capabilities Available	Accreditation	Certified GLP	Purpose
Malta National Laboratory, Chemical Division	Malta National Laboratory, San Ġwann	Mainly Water testing	pH and conductivity tests accredited by NAB. This lab is in the process of accrediting the test for sulphate in effluents and ground water.	No	Mostly test effluent and ground water for basic chemical parameters

Name/ Description of Laboratory	Location	Equipment/ Analytical Capabilities Available	Accreditation	Certified GLP	Purpose
Water Services Corporation Laboratory	Water Services Corporation (WSC), Luqa	Water testing equipment	Accredited to the ISO17025 standard by NAB-MALTA for various chemical tests in the potable and wastewater sector. It aims to increase the scope of laboratory accreditation by other chemical tests and by microbiologica l parameters in the same fields	No	The WSC laboratory is capable of analyzing a large variety of other chemical and bacteriological tests in both the potable and wastewater field. This includes a series of heavy metal analysis, inorganic ion analysis and others. Microbiological tests on water samples are also being performed.

Name/ Description of Laboratory	Location	Equipment/ Analytical Capabilities Available	Accreditation	Certified GLP	Purpose
Chemistry Laboratory	Chemistry Department, UOM, Msida	NMR; AAS; GC-MS; FTIR; UV-Vis spectrophotometer	No	No	NMR: Analysis of chemical structure; AAS: Analysis of metals in digests and extracts; GC-MS: Environmental and forensic analysis; FTIR & UV-Vis spectrophotometer: General spectroscopy.
Biochemistry Laboratories	Department of Physiology and Biochemistry, UoM, Msida	UV-Vis spectroscopy; Gel electrophoresis	No	No	Analysis of proteins, enzymes, DNA, RNA
Drug and molecular Analysis Laboratory	Department of Pharmacology, UoM, Msida	HPLC with UV detection; GC/MS; UV/Vis spectrophotometry; Microplate-based Enzyme immunoassay; Luminometric assay of reporter gene expression; Quantification of genomic DNA and short DNA/RNA oligonucleotides; DNA and protein electrophoresis	No	No	Academic teaching and research

Name/ Description of Laboratory	Location	Equipment/ Analytical Capabilities Available	Accreditation	Certified GLP	Purpose
Water Chemical Testing Laboratory	Delimara Power Station	Analytical balance; pH meters; Conductivity meters; UV/Vis spectrophotometer; High sensitivity oxygen meter; Vacuum filtration apparatus; Viscosity apparatus for fuels; Range of hydrometers for fuels; Distilling apparatus; Hot filtration apparatus for measuring insoluble material in fuels.	No	No	Testing the physical and chemical properties of fuel oils, transformer oils and other light oils. Testing waters to ensure optimum conditions within the system, and to detect faults. Tests on waters for phosphates, silica, chlorides, free chlorine, ammonia, sulphates and others. Dissolved oxygen measurements. Testing of oils for viscosity, density, insoluble matter by hot filtration, and compatibility of fuels.

Name/ Description of Laboratory	Location	Equipment/ Analytical Capabilities Available	Accreditation	Certified GLP	Purpose
Metallurgy & Materials Engineering Lab	Department of Engineering, UoM, Msida	The processing equipment: Surface cleaning equipment: sonicators and zero emissions hot solvent bath systems; Vacuum heat treatment furnace; Ion implantation (brad beam system) and IBAD system; Plasma Nitriding / carburizing system; Muffle furnaces; Salt Baths; CO <sub>2</sub> Laser and CNC manipulator; Lathe, Milling, Pillar drill, Donkey saw, Surface grinder; Welding electric arc and Oxy acetylene; Sample preparation equipment; Plasma immersed ion implantation (3D implantation) system - <i>Under Development</i>	No	No	The laboratories of the Department are geared up for the study of engineering materials. These are equipped with a range of facilities which range from machining, processing and also analyzing materials.
Metallurgy & Materials Engineering Lab (Mechanical)	Department of Engineering, UoM, Msida	The mechanical testing equipment: Tensile testers (0-50 KN, 0-100KN, 0-250KN) equipped with a vast range of accessories; Fatigue testing equipment, (Rotary bending and Tension Compression); Impact testing, (in compression, shear, and tension); Micro hardness measurement; Macro hardness measurement; Nano hardness measurement; Micro and Nano scratch, impact, and fatigue testing; Macro, Micro, and Nano wear testing; Different wear and adhesion testing configurations; Load and Temperature calibration systems.	No	No	Most of the equipment is intended for research purposes i.e. it is not automated. Some of the equipment was designed and build in house by the experts within the department.



Name/ Description of Laboratory	Location	Equipment/ Analytical Capabilities Available	Accreditation	Certified GLP	Purpose
Metallurgy & Materials Engineering Lab (Analytical)	Department of Engineering, UoM, Msida	Analytical capabilities (mostly on order): Scanning electron Microscope (on order); Including AEI, AES, BSI, WDS and more; XRD (micro-diffraction, PDF database, and various other features); Integrated characterization system with 10 advanced surface; characterization techniques capable of nano characterization and Machining; Laser Induced Fluorescences; Confocal Microscope; Potentiostat for the investigation of corrosion mechanisms; Salt spray cabinet	No	No	Most of the equipment is intended for research purposes i.e. it is not automated. Some of the equipment was designed and build in house by the experts within the department.
Saybolt Malta Ltd.	Birżebbuġia	<i>The tests analysis performed can be found in Annex 2 under section D.</i>	No	No	It caters both for the local market and for international market for inspection and analysis on all petroleum products on the market. Such products include Diesel, Unleaded gasoline, LRP, Kerosene, LPG, fuel oil, light cycle oil and others.

### 9.1.1. Public Health Laboratory (PHL)

The Department for Environmental Health is the responsible authority for Food Hygiene and Safety, Drinking Water Quality, and Bathing Water Quality. Monitoring, surveillance and investigation activities for parameters of Public Health importance, associated with the relevant directives, are performed by the Department's Laboratory - the Public Health Laboratory (PHL).

The Official Control of Foodstuffs Directive 89/397/EEC requires laboratories that examine food to be accredited by a recognised accreditation body according to ISO / IEC 17025:2005 'General requirements for the competence of testing and calibration laboratories', and also to participate in proficiency testing schemes. Regulation No. 882/2004, concerning microbiological and chemical sampling and testing of foods, also specifies that designated laboratories must be accredited. The PHL performs Official Testing of Foodstuffs, and in 2008 was accredited to ISO/IEC 17025:2005 for a range of testing services. The PHL scope of accreditation may be viewed on [www.nabmalta.org.mt](http://www.nabmalta.org.mt). One of the main objectives of the PHL is to strengthen its testing capabilities by extending its range of tests and by achieving accreditation of such test on an ongoing basis.

The PHL is also designated National Reference Laboratory (NRL) for a number of chemical and biological parameters in food and feed. As NRL, the PHL must fully comply with Regulation No. 882/2004, concerning microbiological and chemical sampling and testing of foods, and must serve as a centre of excellence in these fields. The PHL has signed memoranda of understanding with a number of renowned laboratory organisations to assist the PHL in its new role of NRL and to act as proxy NRLs when and if required.

The Maltese Government has invested in the refurbishment of the laboratory. The laboratory has also benefited from a Twinning Programme and the procurement of laboratory equipment financed under the 2004 Transition Facility National Programme. The responsible authorities are also committed to take necessary action for the recruitment of suitably qualified personnel in order to meet the new challenges and commitments of the laboratory.

The laboratory is comprised of two main sections. The Microbiology Section (MPHL) is located in the right wing on the first floor of Evans Building, Lower Merchants Street, Valletta. The Main Chemistry Section (CPHL) is located in the left wing also on the first floor of Evans Building, and a satellite radio nuclide laboratory is located in St. Luke's Hospital, Msida.

#### 9.1.1.1. Microbiology PHL (MPHL)

This section is responsible for the investigation of feed, food and environmental samples for microbiological parameters mainly using classical culture techniques. Testing services are provided on a seven day week basis.

During the calendar year 2008, MPHL investigated a total of 5666 samples and performed over 15000 tests. These include about 175 proficiency samples from nine

different external proficiency schemes. The laboratory was responsible for the investigation of samples from fifteen monitoring programmes.

*Table 9.B: The current scope of MPHL's accreditation*

Microbiological tests on Foods		
Food products	Aerobic Colony Count at 30°C by the pour plate technique	FOD-PCD-001 based on MSA EN ISO 4833:2003 (Using classical microbiological techniques and traditional equipment)
Food products	Enterobacteriaceae Colony Count at 37°C	FOD-PCD-003 based on ISO 21528-2:2004 (Using classical microbiological techniques and traditional equipment)
Food products	Escherichia Coli (E-Coli) Colony Count at 44°C	FOD-PCD-004 based on MSA ISO 16649-2 :2003 (Using classical microbiological techniques and traditional equipment)
Food Products	Enumeration of coagulase positive Staphylococci	FOD-PCD-005 based on MSA EN ISO 6888-1:2000 (Using classical microbiological techniques and traditional equipment)
Food Products	Detection of <i>Salmonella</i> spp.	FOD-PCD-006 based on MSA EN ISO 6579:2002 (Using classical microbiological techniques and traditional equipment)
Material/Product/ Matrix tested/calibrated	Type of test/calibration and/or property measured, range of measurement*	Standard Specifications/ In-House Methods/ Equipment/ Techniques
<i>Environmental Samples</i>		
All types of water	Aerobic Colony Count at 22 °C and 37 °C	WAT-PCD-005 based on MSA EN ISO 6222:2000 (Using classical microbiological techniques and traditional equipment)
Bathing, fresh surface and waste water	Enumeration of E.coli	WAT-PCD-003 based on MSA EN 9308-3:2000 (MPN-microplate) (Using classical microbiological techniques and traditional equipment)
Potable quality water, pool water and environmental fresh water	Enumeration of Coliforms and E.coli	WAT-PCD-001 based on DST-MPN (Using classical microbiological techniques and traditional equipment)
Bathing water, fresh surface water, waste water and treatment plants	Enumeration of intestinal enterococci	WAT-PCD-004 based on MSA EN ISO 7899-1:2000 (MPN-microplate) (Using classical microbiological techniques and traditional equipment)
Environmental and Potable Samples	Detection and enumeration of Legionella employing classical microbiological techniques using traditional equipment.	ISO11731:1998 and Health Protection Agency, W12, issued on 11.08.06, Issue No. 1.2.

*Table 9.C: A breakdown of the sample types tested*

Sample Type	No. of Samples Investigated	% of Total Samples Investigated
Food *	1894	33.4
Environmental (non-water)	269	4.7
Water	3028	53.4
Faeces	475	8.4
Grand Total	5666	

\* A large number of food samples tested in 2008 consisted of five sub-samples (N=5).

#### 9.1.1.2. Chemistry PHL (CPHL)

This section is responsible for the investigation of feed, food and environmental samples for physical and chemical parameters using a wide range of analytical techniques. Analysis of trace and ultra trace contaminants are performed to check safety of food and compliance to international standards and/or E.U. regulations concerning testing for food contaminants. Radiation monitoring for gamma emitting radionuclides is performed in the satellite laboratory at St. Luke's Hospital, Msida.

During the calendar year 2008, CPHL investigated a total of 1861 samples for a wide range of parameters. These included samples from fifteen monitoring programmes. Proficiency testing included participation in five external proficiency schemes.

#### 9.1.2. The Water Services Corporation Laboratory

The Water Services Corporation (WSC) is the organization responsible to supply water reliably and dispose of wastewater safely to recognized standards of quality, aiming to satisfy the expectations of all sectors of the community using resources effectively and economically, whilst safeguarding health and the environment.

The present Laboratory has been established in 1995, with the aim of giving indispensable service to the Water Services Corporation and to the private sector. The policy of the Laboratory is to provide the required analytical expertise and analytical service to all laboratory customers and to achieve and maintain a level of quality and excellence in attaining these objectives. The laboratory offers both chemical and bacteriological analysis in the field of water and wastewater analysis and forms an integral part of the Water and Wastewater Quality Section of the WSC.

The main role of the laboratory is to provide rigorous monitoring of the potable water that the WSC supplies its customers, from source of water till the consumer end; and also to monitor the quality of wastewater effluents WSC would be discharging into the environment as well as monitoring of what is being discharged into the sewerage network. The laboratory has since its inception within WSC always served as an internal supervisory body in terms of water and wastewater quality and has always sought to provide a quasi-independent and unbiased service to the WSC.

The WSC laboratory was the first laboratory in Malta to become accredited to the ISO17025 standard. It is presently accredited in a series of chemical tests in the potable water and wastewater field. The intention of the WSC laboratory is to

strengthen its performance by achieving accreditation in a number of other tests on an ongoing basis. The present scope of laboratory accreditation may be viewed on [www.nabmalta.org.mt](http://www.nabmalta.org.mt). Apart from such tests however, the WSC laboratory is capable of analyzing a large variety of other chemical and bacteriological tests in both the potable and wastewater field. This includes a series of heavy metal analysis, inorganic ion analysis and others. Microbiological tests on water samples are also being performed.

Further information about the WSC laboratory and its services can be obtained from the WSC website - annual reports sections. [www.wsc.com.mt](http://www.wsc.com.mt).

### 9.1.3. Rural Affairs Laboratories

#### 9.1.3.1. Diagnostic Laboratories

The diagnostic laboratories within the Plant Health Department are involved in the diagnosis of the different plant pests and diseases. They also provide a valuable service to the plant Quarantine personnel when interceptions are found. Within this section the following five different disciplines are included:

1. The *Entomology Lab*, which is housed at the Agricultural Research Centre at *Għammieri*, is a fully equipped laboratory with compound microscopy, dissecting microscopy and all other utilities needed for the study of insects.
2. The *Mycology Lab*, also housed at the Agricultural Research Centre at *Għammieri*, is a fully equipped laboratory with compound and dissecting microscopy and facilities for fungal isolations.
3. The *Nematology Lab*, which is housed at the Agricultural Research Centre at *Għammieri*, is used for the identification of nematodes, and involves procedures such as extraction from soil and slide preparation.
4. The *Bacteriology Lab* is housed within the Diagnostic Lab at the Plant Biotechnology Centre in Lija. The Laboratory carries out testing for quarantine bacteria affecting local agricultural crops. Testing methods used for diagnosis involve bacterial culture, immunofluorescence tests, molecular tests and inoculation onto indicator plants.
5. The *Virology Lab* is also housed within the Diagnostic Lab at Plant Biotechnology Centre. The Laboratory carries out testing for quarantine viruses using serological, molecular and/or biological methods.

#### 9.1.3.2. Soil and Irrigation Water Laboratory

The Soil and Irrigation Water Laboratory forms part of the Rural Affairs Laboratories, located in *Għammieri*, and also under the management of the Plant Health Department.

The aims of the Soil and Irrigation Water Laboratory include:

- The provision of laboratory services for soil and irrigation water testing;
- The assistance to the farming community and the general public in soil and water use.

#### 9.1.3.3. *Plant Tissue Culture Laboratory*

The Plant Tissue Culture Laboratory was set up at the Plant Biotechnology Centre for the production of virus-free rootstock. In 2006, the activity of the Plant Tissue Culture Lab was diversified to the conservation and sustainable use of local varieties of fruit tree species which are in danger of genetic erosion. Currently, the work carried out at the Tissue Culture Laboratory involves *in vitro* propagation of ornamental plants and micro-propagation of endangered local wild species (such as orchids and tulips) for conservation purposes.

#### 9.1.4. Department of Chemistry

The Department of Chemistry at the University of Malta may offer expertise in data collection in environmental analysis; such data may include air sampling for PM10's, and other pollutants such as benzene, and sampling of the aquatic environment. Chemical analysis may also be subsequently carried out on the samples thus collected.

The Department of Chemistry is equipped to carry out chemical analysis using a range of methodologies, both in terms of expertise and equipment available. Such methodologies include FTIR analysis, NMR, GC, HPLC and UV-VIS spectrometry.

Being largely a teaching institution, the Department - possibly in collaboration with the University's Health and Safety officers - may provide training and education, and to effectively convey information to workers and the public.

Furthermore, again in collaboration with the University's Health and Safety officials, we have the necessary expertise to carry out risk assessment, and to subsequently draft and implement policies for risk management and reduction.

#### 9.1.5. Department of Metallurgy and Materials

The Department of Metallurgy and Materials has chosen Surface Engineering and Degradation as areas of specialization and as such most of the equipment is intended for the analysis of the surfaces of solid materials.

The main activity in the laboratories of the Department is geared up for the study of engineering materials (14 years of experience) and Bio (2008-2009) materials and their surfaces. At the Department of Metallurgy and Materials, the crystalline structure, chemical composition and mechanical properties of materials are investigated. The lab specializes in the identifications of reasons leading to material degradation and develops solutions to solve such problems either through surface engineering, material selection or bulk heat treatment. The main areas of interest include surface engineering, light alloys, Bio materials, intelligent materials, and material degradation.

#### 9.1.6. Saybolt Malta Limited

Saybolt Malta Ltd. has been active since 1992 and has been an ISO 9001 certified company since 2001. Early next year ISO 17025 for laboratory activities and sampling will also be awarded.

Saybolt carries out inspection and analysis in the petroleum, petrochemical and semi-finished products and fluids sector of the oil industry. The most important activity is the control of the quality and quantity of these products in accordance with customer requirements and specifications. Inspection activity is also carried out on agricultural and dry/bulk cargoes, but the core business of the company remains, as it has done for over 100 years, in the petroleum and petrochemical domain.

In addition to all standard tests and procedures, Saybolt is also equipped to provide specialised services, such as terminal audits, fuel blending assistance, tank inspections and custody transfer systems.

#### 9.2. Assessment and Comments

In Malta, as yet, there are no GLP Compliant Laboratories.

The NAB-MALTA has accredited five laboratories namely:

1. Water Services Corporation (WSC)
2. Malta National Laboratory
3. Vehicle Technical Service
4. MLS Bio DNA ltd.
5. Public Health Laboratory

It is currently in the process of accrediting another three laboratories. At the same time the NAB-MALTA is processing applications for extensions to scope which were received almost from all the accredited laboratories.

More applications for accreditation are expected in 2010 especially from laboratories involved in regulatory work.

## 10. Chemical Emergency Preparedness, Response, and Follow-up

### 10.1. Chemical Emergency Planning

The staff at Mater Dei Hospital (MDH), a public hospital in Msida, Malta, compiled a Major Incident Scheme whereby all members of staff are to be familiarised with the contents of this document.

The plan established within the Major Incident Scheme describes the activities of the Medical response of MDH to a major incident, that is when six or more persons are seriously injured and will require simultaneous care. This plan is designed to deal with such incidents but this plan can also be quickly adapted to deal with multiple cases of poisoning, infectious diseases. A separate plan exists in case of a flu pandemic. An emergency response team (ERT) made up of medical doctors was also set-up. The ERT is made up of a voluntary group of doctors working both in the private and public sector, who respond to a major incident during their own free time; although members of the group may be contacted by MDH in case of need, they would only be able to respond if they are not on duty in hospital or elsewhere.

To date, the staff working in the MDH Emergency Department is not specifically trained in case of chemical incidents.

#### 10.1.1. Responsibilities of the various agencies involved

A number of agencies may be involved in dealing with a major incident. The following agencies carry out the following:

- *Department of Civil Protection (CPD)*
  - o Extinguishing fires;
  - o Containment of chemical spills;
  - o Decontamination from hazardous material;
  - o Provide skills and appropriate equipment to extricate entrapped casualties;
  - o Improve area of work by providing lighting and in some cases protection from the elements by providing cover with tarpaulins;
  - o Provide personnel to lift and carry casualties to casualty clearing station;
  - o Control of “danger areas”; and
  - o Declaration of safe areas.

The CPD have no specific chemical emergency plan, however they have their own procedures and a response unit to deal with such emergencies. There are no plans established that include regular testing under simulated conditions and are there provisions for modification of the plan based on experience of specific emergencies.

Currently the CPD operates on an ad hoc basis depending on the emergency. The CPD organizes in-house training and also some training is done by CPD personnel abroad.



In case of chemical incidents only the CPD and to a lesser degree the Health Services have the equipment and the trained staff. The clean-up after an incident is also carried out by the CPD.

At CPD, the only inventories that exist are those of COMAH sites that are regulated by the Seveso II Directive.

The CPD is also responsible for communication with the public whereby press releases are issued by the Director of CPD.

- *Utilities*

- Switching off electricity supplies;
- Making gas cylinders safe (cooling);
- Shutting off water main supplies; and
- Use of Public and commercial broadcasting to mobilise essential personnel and to issue guidance to the public at large.

- *Police*

- Maintenance of law and order;
- Securing the site;
- Traffic and crowd control;
- Provide a survivor reception area;
- Supervision of the provision of food and drink for the rescuers;
- Notification of Casualty relatives; and
- Arrangements for the Dead.

- *Armed Forces*

- Defence of the Republic;
- Dealing with armed law breakers;
- Bomb disposal; and
- Security at sea.

### 10.1.2. Decontamination

If an incident involving chemical contamination has occurred, decontamination will be carried out by the CPD on site.

MDH has a decontamination tent in store, which is not functional. To date there is no plan for its use in chemical emergencies and staff at the Accident and Emergency Department is not trained for its use in chemical emergencies.

MDH is not equipped for transportation of chemically exposed persons.

### 10.1.3. Personal Protective Equipment (PPE)

MDH has a limited stock of PPEs. These were mainly procured for the CHOGM activities held in 2005 so some of these PPEs may be expired. Most of the PPEs have never been tried since the staff at MDH is not trained to use them.

#### 10.1.4. Antidotes

A wide range of antidotes is available at MDH. However, for most scenarios, quantities available are only for small-scale incidents and not for mass chemical incidents. The only exception is atropine injections which are stockpiled for treating approximately 1300 patients.

Stockpiles at MDH contain pharmaceuticals and related medical supplies useful in airway management, IV fluid administration, antibiotics, antitoxins for treating casualties of various bioterrorism acts and antidote packs against exposure to chemicals such as cyanide and organophosphates. These stockpiles are being stored at A&E and at the Day Care Unit as regards in-house hospital supplies. At the A & E department, the available onsite stockpile are either stored in rucksack pouches or aluminium boxes and include the advance life support (ALS) pharmaceuticals, the pharmaceuticals indicated for minor injuries (priority 3), for inhalations, for circulation and the antidotes. The antidotes stored at A & E are kept in an aluminium box - there is one box with cyanide poisoning kits (10\*2) to be issued in case of a chemical incident and treatment should be administered within 30 minutes of exposure. There are also aluminium boxes for nerve agent intoxication including organophosphate/pesticides poisoning, containing pralidoxime (40 vials) and atropine vials (1400)/drops (240). Once the patient has been decontaminated, treatment of nerve agent exposure consists of two parts: airway management and administration of antidotes.

As regards the chemicals available in the industry there is no national chemical register at the moment, so unless requested by industrial factories no one knows if the right antidotes are stored. The hospital pharmacy stores other antidotes keeping assigned standby stocks such as sodium thiosulphate, sodium nitrite, dicobalt edetate etc. In case of an incident the Medicines and Poisons Information Section (office hours on (+356)25456504) or MDH Pharmacy (out-of-office hours on (+356)25456514) should be contacted.

The antidote kits for cyanide poisoning and organophosphate/pesticide poisoning localized in the accident and emergency area should be issued upon request. The stockpiles should cover from 5-10 patients depending on the incident. With the kits there is a supply of oxygen cylinders available.

#### 10.1.5. Medicines and Poisons Information Service

A Medicines and Poisons Information service is provided by the Pharmacy Department at MDH. A poisons information service is currently being provided during office hours (Monday to Friday 07:30 to 15:00 and on Saturdays 07:30 to 13:15).

After hours emergency poisons' information service is provided by the shift pharmacist on duty at MDH pharmacy as part of his/her duties in providing a 24 hours emergency pharmacy service both for the community sector as well as the hospital.

MDH are not provided with any information as regards identity of chemicals imported (except for pesticides). This hampers greatly their response in any chemical incident. In the near future, discussions on the establishment of a national poison centre will have to see a co-ordination system between MDH and MSA since the latter have access to most of the information required to import chemicals, cosmetics, biocides, pesticides, etc.

The pharmacy is not aware of the existence of dedicated emergency communication systems for poisons information or chemicals information.

## 10.2. Chemical Incident Response

According to the WHO, the overall, external causes of death (injury and poisoning) are responsible for 25.5 deaths per 100 000 (WHO<sup>37</sup>, 2005).

This section provides the opportunity to list in Table 10.A and describe some of the more significant chemical incidents that have occurred recently in the country with the outcomes.

*Table 10.A: Examples of Chemical Incidents in the Country*

Date of Incident	Location	Type of Incident	Chemical(s) Involved	D: Number of Deaths I: Number of Injuries E: Numbers Evacuated	Environmental Contamination or Damage
14 August 2008	Wied Dalam B'Bugia	Spillage of JET A1 at storage site	JET A1 fuel	None	Air, soil and groundwater pollution <sup>38</sup>
12 March 2008	Naxxar	Explosion	Pyrotechnics	D = 2	Three houses and a garage were destroyed by the blast; Damages ro nearby houses and garges; Air pollution
2006	Landfills	Fire	Toxic waste	None	Air Pollution
2005	Trimite Factory, San Ġwann	Fire	Paints	I =1	Air Pollution; Damaged Structure

*Table 10.B: Accidents at work involving chemical, explosive, radioactive, biological substances*

Sex	Year					
	2005		2006		2007	
	Number	%	Number	%	Number	%
Males	78	69.6	128	62.1	92	60.1
Females	34	30.4	78	37.9	61	39.9
Total	112	100.0	206	100.0	153	100.0

<sup>37</sup> Source: <http://www.euro.who.int/Document/E82865MT.pdf>

<sup>38</sup> The Water Directorate at MRA proposes that an information network is established so that any accidents involving the spillages of chemicals can be notified to the same Directorate immediately so that required corrective action is taken. An example of such a reported spillage is given in Table 10.A, but there is no systematic reporting system.

### 10.3. Chemical Incident Follow-up and Evaluation

The Department of Health Information and Research (DHIR) is responsible for the Injury Database (IDB). The IDB, commissioned by the EU and initially set by DG Sanco, is based on a systematic injury surveillance system that collects data from emergency departments and comprises existing data sources, such as causes of death statistics and hospital discharge registers. Main aims are:

*Gozo General Hospital* - On patient's arrival, Accident and Emergency (A & E) staff fill in a specific form with standard information harmonized with that collected by other Member States. Completed forms are forwarded to the DHIR where they are coded against the IDB Coding Manual Data. All data is then entered into the main database.

Cross links are carried out quarterly with the National Death Register and the Hospital Discharge Register in order to capture injuries and injury-induced deaths that bypass the A & E Department.

*Mater Dei Hospital* - Data for all patients presenting at Emergency Department is forwarded to DHIR. Data mining software is presently being tested to capture only patients suffering from injuries.

The minimum data set includes the following:

- Age
- Sex
- Residence
- Date and Time of Injury
- Date and Time of Attendance
- Treatment and Follow up
- Intent (violence, intentional self-harm, unintentional)
- Place of Occurrence
- Mechanism of Injury
- Activity when injured
- Object/substance producing injury
- Part of Body injured
- Narrative

It is important to highlight that even though the above list of information is requested not all the data is recorded at A & E.

The IDB is then used for follow-up surveillance on the issues that raise the most concern. It is intended that in the near future investigations on specific issues will be carried out.

#### 10.4. Assessment and Comments

Various European Regulations and Directives, transposed into national legislation, require Member States to appoint a body or bodies responsible for receiving information on the placing of the market of chemicals, pesticides and cosmetics, including information on the chemical composition of such products, and for making such information available in cases where suspected poisoning arises from these products. Such information may only be used to meet any medical demand by formulating preventive and curative measures, in particular in emergencies.

A poison centre in Malta would provide a quick mechanism to provide information to medical practitioners in case of acute exposure to certain chemicals which may result to loss of life in certain cases of poisoning. Currently, in most cases of poisoning, the medical practitioner is working blindly on the chemical identity of the product since information, that could lead to an effective antidote/treatment specific to the type of poisoning, is lacking. Lacking a readily available source of information, precious time would be lost in trying to identify the contents of the product, which could have fatal consequences.

Being the competent authority for the regulations concerning chemicals, pesticides and cosmetics, the MSA can contribute to an eventual poison centre by making available this useful information to local medical practitioners.

## 11. Awareness/Understanding of Workers and the Public; and Training and Education of Target Groups and Professionals

### 11.1. Awareness and Understanding of Chemical Safety Issues

#### 11.1.1. Health and Safety Awareness-building for Workers

The Occupational Health and Safety Authority (OHSA) strongly believes in the importance of awareness-building and information as fundamental tools to bring about a higher level of education and good-practice in the OHS field. Given the ever-changing world of work and new and emerging risks, the fulfillment of this objective necessitates information that is updated on an on-going basis. To this end, the OHSA continues to provide information and to disseminate it as widely as possible. A number of press releases and feature articles have indeed been published in local media. Moreover, a number of information campaigns organized by the OHSA have been linked with international initiatives, especially those organized by the European Agency for Safety and Health and the Senior Labour Inspectors Committee (SLIC).

There is an increasing amount of data being produced about emerging risks; this naturally necessitates ongoing research to ensure that these risks are identified in due time and prevention measures adopted. To this end, the OHSA is currently participating in the Risk Observatory of the European Agency for Safety and Health at Work as well as being a partner in a European project to identify such risks.

#### - *Media Initiatives*

Due to the limited financial resources available, media initiatives remain limited to those offered to the Authority free of charge - OHSA information video clips are regularly sent to all television channels with a request for these clips to be aired as community announcements - regrettably, most channels look upon the transmission of such announcements from an economic perspective, and do not transmit messages despite the OHSA's request. OHS officers participate in several radio and television programmes, mostly on an *ad hoc* basis. The Authority has issued a number of press releases that dealt with specific areas of concern. There were also various letters to the editors which were sent out by the Authority. On both occasions, these have been of both a proactive as well as a reactive nature.

#### - *'Healthy Workplaces - Good for You. Good for Business'*

With the theme - *'Healthy Workplaces...Good for You...Good for Business'* - the European Safety and Health at Work campaign for 2008-2009 was launched in Malta as part of a pan-European campaign to raise awareness about the importance of risk assessments at the place of work. The European Agency for Safety and Health at Work, in consultation and agreement with the member states deemed it fit to launch this campaign about the need for improvement in risk assessment and its practical implementation following an EU policy review of the European Framework Directive 89/391, and the five 'daughter' directives. The review found that there was general lack of awareness of what is required and how to carry out a risk assessment. Moreover, many considered risk assessment as a one-off' action, with no review and

update while the risks were not analysed and evaluated collectively; consequently, separate measures were being set in place with no coordinated approach to the analysis of conditions in the workplace. It was also established that superficial risk assessments only identified 'obvious and immediate risks' whereas long-term effects were either not considered or were neglected, such as those caused by chemical substances. Moreover psychosocial risks and work organisation were also rarely considered in a risk assessment. On the other hand, the implementation of the measures taken is very often not monitored properly by the employer. The campaign will run over a period of two years, culminating in the organisation of two European Weeks in October of each year, this year being held between the 20<sup>th</sup> and 26<sup>th</sup> October.

- *OHS Good Practice Awards*

The OHSA has also launched its annual Good Practice Awards in occupational health and safety in June this year. In line with the European theme, the 2008 edition of the Awards focused on risk assessment. The awards aim to demonstrate, by example, to all employers and workers the benefits of conducting risk assessments and promoting healthy workplaces to safeguard the occupational health and safety of workers. The awards also provide those selected with national recognition for their role in improving working conditions in Malta. The nominations are then adjudicated by a panel of independent judges and the winners will be announced in a ceremony held by the Occupational Health and Safety Authority.

- *World Day for Safety and Health at Work*

The OHSA marked the World Day for Safety and Health at Work which was held on 28 April 2008 with the theme chosen by the International Labour Organisation (ILO) being 'My Life, my work, my safe work - managing risks in the work environment'. It particularly aimed at highlighting the importance of controlling and reducing risks in workplaces to prevent work-related accidents and ill-health. The commemoration of the World Day emanates from the Workers Memorial Day started in America and Canada in 1989 to commemorate dead and injured workers annually on 28 April, a date which the International Confederation of Free Trade Unions and Global Union Federations converted into a global event endorsing also the concept of sustainable workplaces and work.

### **11.1.2. Health Promotion and Environmental Awareness among the Public**

Public awareness on environmental issues has increased significantly in recent years. Active participation occurs mostly during issues regarding waste and pollution emissions, in particular when they involve locations close to residential areas. Awareness regarding the association between the environment and health issues is, however, still somewhat lacking. Malta is slowly catching up with the implications of implementing the Aarhus convention requirements on access to information, public participation in decision-making and access to justice in environmental matters. There is growing involvement of the Maltese population in environmental policy making and also in changing individual behaviour in favour of an improved environment. Several initiatives for public information are taking place through the



various media. The Health Promotion Unit is very active in this area. Examples of awareness campaigns include sun awareness campaigns, and campaigns on the risks of smoking and second-hand tobacco smoke. MEPA, through WasteServ is also conducting several concurrent educational campaigns in schools and through the local media especially since it operates an area in which the public is highly critical.

## 11.2. Education and Training for Sound Management of Chemicals and Waste

### 11.2.1. Educating Children on Health and Safety

A change in mentality will have a more positive outcome if the concept of benefits accruing from having high level of OHS becomes ingrained from an early age. The OHSA has always recognized and emphasized this especially as highlighted in the Rome declaration on mainstreaming OHS in education. The information and awareness raising talks about occupational health and safety amongst pupils and students conducted by the OHSA staff remain very popular with primary schools in Malta. The current official mascot of the campaign 'NAPO' (as created by a European consortium) has become a household name in various localities. During these visits, students are guided through a short film featuring NAPO and a poster exhibition targeting mainly health and safety signs. This is then followed by an interactive talk. The mascot NAPO always makes an appearance at the end of the talk to distribute an informative and educational activity booklet produced by the OHSA which the students are encouraged to work through, either at home or as a class event. A good number of schools take up the opportunity to organize a health and safety day or week, with pupils working on projects targeting specific OHS subjects. The Authority also cooperates actively with the Health and Safety Unit of the Ministry of Education, Youth and Employment, with the scope of organizing joint activities targeting school children.

### 11.2.2. Educating Children on Waste Management

WasteServ Malta Ltd. gives priority and great prominence to waste management issues in educational curricula and programmes aimed at reaching out to teachers and school children. Special attention is thus given to waste management issues, together with the promotion of changes in social attitudes and behaviour concerning waste management among young people.

Schools and educators have shown a great commitment towards including waste management in their educational programmes. Around 200 schools in Malta and Gozo have started to separate waste within their premises and every week WasteServ representatives visit schools to carry out interactive, educational talks. Throughout the past years, WasteServ has also supported *EkoSkola* by means of sponsorship. The company also offers educational tours at its facilities for students and adults. These are constructive learning experiences where visitors can learn about the various activities related to waste, ranging from recycling methods to producing energy from waste.

An example of collaboration between schools and WasteServ is the Waste Patrollers initiative. This communications activity entailed the patrolling of Bring-In Sites in various localities by Primary School children. Apart from guarding the area, the

children were also actively involved in the assistance of the public when they visit the sites to separate waste. This initiative aimed at creating awareness on contributing to a clean environment among citizens starting from the younger generation.

WasteServ also sponsors and is strongly involved in the implementation of the *Xummiemu* Mascot children's campaign. *Xummiemu* is synonymous with environmental issues among children, following an extensive and successful campaign. The strategy was designed to include various environmental themes addressing children, and to empower the young to take action in favour of a better environment.

Last but not least, WasteServ has also created its signature tune in the form of a song entitled "Waste Matters". The main message of this song is that of waste separation and its impact on the environment. Armed with this song, WasteServ also organized a series of school visits over the past scholastic year where the song is performed in a bid to continue to raise awareness on waste issues and to encourage waste separation.

### 11.2.3. Human Health and Environmental Studies

Human health and environmental studies issues are now an integral part of the public schools curricula, with the private schools following suit. University of Malta has also introduced a number of courses from Diploma, to postgraduate degrees in Environmental Sciences and other related subjects. Related subjects such as environmental health, food hygiene, occupational health and safety and risk management of chemicals as learning outcomes of practical sessions have also gained momentum not only within the teaching institution but also as part of regular training programmes or refresher courses for a number of locally based industries.

### 11.2.4. Training Initiatives

#### - ADT

The ADT has a database of drivers trained to drive vehicles carrying dangerous goods. Drivers are trained through the Employment Training Centre (ETC) but exam papers and certificates are issued by the ADT. The ADT also has a database of Dangerous Goods Safety Adviser (DGSA) trained through a foreign training service provider (there are no such training service providers in Malta). Exams are issued through the ETC and certificates are issued by the ADT.

#### - OHSA

In line with its business plan of 2008, OHSA retained its core training activities and even managed to introduce new courses in the Safety aspects of Manual Handling and Office Ergonomics. The beneficiaries of these training sessions ranged from construction and road-building companies, to manufacturing enterprises, hotels, newly appointed ambulance drivers, the primary and mental care sector, public service human resources managers, as well as guidance teachers. Regular collaboration with the St. John Ambulance and The Malta Red Cross Society results in the qualification of first aiders who attend the OHSA's course entitled *First Aid and Safety at Work course*. The OHSA is aware that it must continuously strive to strike a balance in

carrying out its full range of core functions - and had expressed its serious doubts as to whether this momentum in delivering training can be sustained if the human resource capacity within the OHSA is not improved.

- *MEPA*

Currently MEPA are working on the organization of the following courses: for personnel involved in the installation, maintenance and servicing of refrigeration/heat pump equipment containing fluorinated greenhouse gases; for waste carriers and waste brokers; and for operators and assessors of petrol stations.

- *MRA*

Engineers certifying LPG installations have to be trained as Competent Persons as defined in LN 249/2008 (Liquid Petroleum Gas Market Regulations, 2008). Requirements for competent persons working in other fuel sectors might be introduced as per requirements in LN 278/2007 (Petroleum for the Inland (Wholesale) Fuel Market Regulations, 2007).

- *MSA*

The Malta Standards Authority (MSA) is responsible for the training of agricultural workers in safe application procedures for pesticides and the wearing of protective clothing against exposures. The agricultural workers acquire the relevant information on: the legislation concerning pesticides and labelling of chemicals, the composition of PPPs and their mode of action, the responsible use, storage, disposal and record keeping, the Health and Environmental risks related to the use of PPPs, risks on bees related to pesticide use, Integrated Pest Management, Pesticides Machinery, and on the Health and Safety issues related to the use of PPPs. The certificate of the successful completion of this course will be subject to a multiple choice exam which is done both in writing and orally.

- *NAB-MALTA*

NAB-MALTA organizes various training sessions related to accreditation issues. Lately it has organized a course on internal auditing in laboratories which will be repeated in 2010.

- *UOM*

At the university the undergraduate courses include study units in health and safety, both at a theoretical level through lectures, and at a practical level through the implementation of health and safety measures and risk assessments in practicals. Also for the staff, the Health and Safety Services provide training and information on health and safety issues, and continuously make assessments of the workplace. There are a number of initiatives that are to be continuously taken by all staff to improve health, safety and the work environment. The Health and Safety Services provide tailor made courses to all staff on request, as well as general health and safety training.

## 12. International Linkages

### 12.1. Co-operation and Involvement with International Organizations, Bodies and Agreements

*Table 12.A: Membership in International Organizations, Programmes and Bodies*

International Organization/Body/Activity	National Focal Point (Ministry/Agency & Primary Contact Point)	Other Ministries/Agencies Involved
UNEP	Mr Victor Camilleri Permanent Representative of Malta to the UN Geneva	OPM/MEPA
IRPTC - National Correspondent	Director Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea Gzira GZR03, Manoel Island	
National Cleaner Production Centre	Mr Anton Pizzuto Director Cleaner Technology Centre, UOM, Msida	
IPCS	MSOC	
WHO	MSOC-DEH	
FAO	MFA Mr Walter Balzan Ambassador and Permanent Representative Embassy of Malta Rome	
UNIDO	Mr Christopher Grima Permanent Representative of Malta to UNIDO Embassy of Malta Vienna	
International Labour Organisation (ILO)	MSOC Mr Noel Vella Director Department of Industrial and Employment Relations	MFA Mr Victor Camilleri Permanent Representative of Malta to the ILO Permanent Mission of Malta, Geneva
European System of Central Banks	MFEI Central Bank	Malta Financial Services Authority (MFSA)
Eurosystem	MFEI Central Bank	
European Bank for Reconstruction and Development	MFEI/Central Bank The Hon. Tonio Fenech - Governor Mr Michael C. Bonello	

International Organization/Body/Activity	National Focal Point (Ministry/Agency & Primary Contact Point)	Other Ministries/Agencies Involved
	Alternate	
NATO/PFP	OPM - AFM	
URBACT Programme	OPM - DLG	
UN	OPM - AFM	
UNWTO	OPM - Tourism	
Senior Labour Inspectors (SLIC)	MSOC-OHSA	
European Agency for Safety and Health at Work	MSOC-OHSA	
Seveso II Committee of Competent Authorities (CCA)	MSOC-OHSA	

*Table 12.B: Participation in International Agreements/Procedures Related to Life Cycle Chemicals Management*

International Agreements	Primary Responsible Agency	Relevant National Implementation Activities
Agenda 21 - Commission for Sustainable Development	Tourism & Sustainable Development Unit Office of the Prime Minister Auberge d'Italie Merchants Street Valletta	National Commission for Sustainable Development Ms Karina Fiorini, Tel No 229152028 Mr Etienne Bartolo, Tel No 22915064
UNEP London Guidelines (voluntary procedure)	OPM/MEPA	
FAO Code of Conduct (voluntary procedure)	MRRA	
Montreal Protocol	OPM/MEPA Mr. Anthony Aquilina	
ILO Convention 170	Not a State Party	DIER
ILO Convention 174	Not a State Party	DIER
UN Recommendation for the Transport of Dangerous Goods	MTA Dangerous Goods Office Sa' Maison Road FLORIANA FRN 1612 <u>Material of Class 7:</u> Senior Manager (Radiation Protection) - Dr. Paul Brejza Radiation Protection Board c/o OHSA, 17, Triq Edgar Ferro PIETA' PTA 1533	
Basel Convention	OPM/MEPA Mr Frank Lauwers	
Rotterdam Convention	OPM/MEPA	
Stockholm Convention	OPM/MEPA	

International Agreements	Primary Responsible Agency	Relevant National Implementation Activities
Chemicals Weapon Convention	MFA	National Authority of Malta for the Implementation of the Chemical Weapons Convention Director of the National Authority
Regional/Subregional Agreements (specify)	Mediterranean Action Plan (UNEP/MAP) Director Global Issues MFA	

## 12.2. Participation in Relevant Technical Assistance Projects

*Table 12.C: Participation as Recipient in Relevant Technical Assistance Projects*

Name of Project	International/Bi-lateral Donor Agency Involved	National Contact Point	Relevant Activities
Acquire knowledge on the regulations concerning Pesticides	Twinning light project with the competent Italian authority - EU funds	MFEI-MSA	Information on biocides and plant protection products with a special emphasis on the labelling provisions; dossier evaluation; REACH & CLP
Leonardo da Vinci Project on e-Learning	European partnership aiming to enhance work floor safety through the development of a user-friendly e-Learning training course	MSOC-OHSA	This basic e-learning training programme will thus provide a response to existing shortcomings by being readily and directly accessible with user-friendly interactive modules, which include: accidents, risks, legislation, fire safety, confined spaces, working at heights, dangerous substances, PPE, machinery and electricity.
Specialised Research on OHS and development of OHS accreditation system	Project is co-financed under the EU Cohesion Policy 2007-2013.	MSOC-OHSA	Through this project specialized research will be carried out on various aspects of OHS in order to (i) obtain better statistics on occupational injuries, physical and psychological ill-health; (ii) inquire into the prevalence of access of workers to internal and external OHS services; (iii) determine the level of compliance of work equipment with legal requirements and (iv) identify the costs of prevailing risk levels of OHS to the nation. In addition, the project will also aid in the development of an accreditation scheme for third party OHS practitioners who offer services to employers.

### 13. Resources Available and Needed for Chemicals Management

#### 13.1. Resources Available in Government Ministries/Institutions for Chemicals and Related Waste Management

*Table 13.A: Resources Available in Government Ministries/Institutions*

Ministry / Authority / Department	Number of Professional Staff Involved with the Management of Chemicals	Type of Expertise Available
<b>OPM</b>		
Malta Environment and Planning Authority	1 working directly on chemicals; 3 working on waste; 8 working on national permitting; 1 working on priority substances vis-à-vis the water framework directive	B.Sc. graduates (Biology & Chemistry)
<b>MITC</b>		
Malta Transport Authority	1	DGSA/Health & Safety
Water Services Corporation	A Laboratory Manager, four scientists (two on parental leave), one senior laboratory technician, five laboratory technicians and an administrator.	2. B.Sc.(Biology & Chemistry), M.Sc. (Biology) 1 B.Sc. (Biology & Chemistry), M.Sc. (Chemistry) 1 B.Sc. (Biology & Chemistry), M.Sc. (Agricultural Science) 1 B.Sc. graduate (Biology & Chemistry) 1 B.A. Environmental Studies 1 Diploma in laboratory technology
Enemalta Corporation	3 Engineers 1 Shipping Officer	3 Mechanical Engineers Senior Officer - MBA Graduate
<b>MRRA</b>		
Malta Resources Authority	6 employees working in the Energy Directorate within the Fuel Section. Fuels regulated are petrol, diesel, gasoil, fueloil, avgas, aviation fuel, kerosene, LPG, LNG and light heating oil (LHO)	6 warranted engineers
Plant Health Department	1 chief scientific officer, 1 principal scientific officer, 2 scientific officers	2 M.Sc. graduate scientists; 2 graduate scientists (biology & chemistry)
WasteServ Malta Ltd.	5	2 postgraduate scientists 1 pharmacy graduate with post-graduate in forensic science



Ministry / Authority / Department	Number of Professional Staff Involved with the Management of Chemicals	Type of Expertise Available
		1 warranted mechanical engineer 1 science graduate
<b>MSOC</b>		
Public Health Laboratory	Microbiology Lab: three scientific officers, one pharmacist and ten medical laboratory scientists. Chemistry Lab: eight technical persons; three scientific officers, a pharmacist (presently on long parental leave) and four medical laboratory scientists.	Food Sc. and Technology Food Safety and Nutrition Food Compositional Analysis Trace Contaminant Analysis Environmental Analysis 2 B.Sc. M.Sc. 3 B.Sc. 3 Dip.
Occupational Health & Safety Authority	1 employee working in the Biological & Chemical Agents Section 2 employees working within the Machinery, Equipment and Plant Installation Section	Scientist - Chemistry and Biology at graduate level, Biology at Post graduate, Management at Post Graduate, Senior manager with engineering degree, Occupational Health officer with diploma qualification in occupational health and safety, and another diploma in first aid
<b>MFEI</b>		
Customs Division	1 working on chemicals	1 pharmacist
Malta Standards Authority	5 employees working in the Regulatory Affairs Directorate within the Foodstuffs, Chemicals, Pesticides and Cosmetics Unit; 1 employee working within the Market Surveillance Directorate;	3 graduate scientists (Biology & Chemistry); 1 graduate scientist (Biology & Chemistry), M.Sc.; 1 graduate scientist (Mediterranean Agro-ecosystems management) 1 graduate pharmacist
National Accreditation Board (NAB-MALTA)	2 employees	2 graduate engineers

*Table 13.B: Financial Estimates for the year 2009 according to the concerned Government Ministries*

Ministry	REVENUE (€)	EXPENDITURE (€)					CAPITAL (€)
		RECURRENT <sup>39</sup>					
		Personal Emoluments	Operational and Maintenance Expenses	Programmes and Initiatives	Contributions to Government Entities	Total Recurrent	
OPM	7,943	42,115	8,549	38,394	7,581	96,639	40,680
MITC	122,323	4,971	2,344	39,327	23,275	69,917	94,177
MRRA	11,068	47,564	6,141	39,842	1,191	94,738	46,642
MSOC	539,838	157,902	39,558	951,475	49,722	1,198,657	38,489
MFEI	2,348,332	40,502	7,704	584,449	11,910	644,565	60,632
MJHA	19,405	58,210	8,466	9,341	3,068	79,085	13,161

<sup>39</sup> Explanatory Notes on Standard Objects of Expenditure <http://finance.gov.mt/image.aspx?site=MFIN&type=estimate&ref=524>

### 13.2. Resources Needed by Government Institutions to Fulfil Responsibilities related to Chemicals Management

*Table 13.C: Resources Needed by Government Institutions to Fulfil Responsibilities Related to Life Cycle Chemicals Management*

Ministry / Authority / Department	Number of Professional Staff Involved with the Management of Chemicals	Type of Expertise Available
<b>OPM</b>		
Malta Environment and Planning Authority	2 working directly on chemicals; 8 to work on waste; 16 to work on national permitting; 6 to 10 to work in the Ambient Monitoring Team	B.Sc. graduates (Biology & Chemistry)  Laboratory Technicians
<b>MITC</b>		
Malta Transport Authority	Engineer, DGSA, more Enforcement Officers and clerical staff	University degree/DGSA Training/Enforcement and Road side check training
Water Services Corporation	At least 5 B.Sc. graduates preferably with experience in chromatography techniques. 1 system operation manager with Diploma qualification in engineering	Training on sample treatment for trace contaminant analysis Advanced training on the use and applications of HPLC and GC systems. Training on optimization of MS detection and interpretation of spectra. Training on Confirmation procedures for trace contaminants. Statistical evaluation of data.
Enemalta Corporation	Sufficient	REACH Expertise
<b>MRRA</b>		
Malta Resources Authority	At least another 6 warranted engineers	Engineers working on LPG require training as for the Competent Person defined in LN249/2008; studies on chemical risk assessments; regulatory requirements within the Fuel Sector.

Ministry / Authority / Department	Number of Professional Staff Involved with the Management of Chemicals	Type of Expertise Available
Plant Health Department	Since all of the above listed professional staff have other duties in addition to laboratory procedures, the current staff complement is not sufficient; at least another 6 scientific officers are needed	At least a first university degree in sciences and preferably some experience or further training in laboratory work, and phytosanitary procedures
<b>MSOC</b>		
Public Health Laboratory	Public Health Laboratory At least 5 B.Sc. graduates preferably with experience in chromatography techniques. 1 system operation manager with Diploma qualification in engineering	Training on sample treatment for trace contaminant analysis Advanced training on the use and applications of HPLC and GC systems Training on optimization of MS detection and interpretation of spectra Training on Confirmation procedures for trace contaminants. Statistical evaluation of data.
Occupational Health & Safety Authority	At least 4 employees with university qualifications, 2 have to be familiar with chemical engineering and another 2 that are familiar with toxicology	Training including practical component on ; -assessing detailed chemicals risk assessment in view of regulatory requirements (with emphasis on how to tackle long term effects)  -assessing the use and validity of numerically based approaches in chemicals risk assessment (with emphasis on how to tackle long term effects)  -implementation of OELVs in the workplace, including preliminary studies and calculations , use and limitations of control banding  -emerging chemical risks related to occupational health and safety, evaluation and control measures
<b>MFEI</b>		

Ministry / Authority / Department	Number of Professional Staff Involved with the Management of Chemicals	Type of Expertise Available
Malta Standards Authority	<p>1 Scientist - Plant Protection Products covering:</p> <ul style="list-style-type: none"> <li>• Authorisation of Plant Protection Products;</li> <li>• Responsible for the risk assessment of Plant Protection Products;</li> <li>• Follow-up the work of the Pesticides Control Board;</li> <li>• Preparation of Reports;</li> <li>• Maintenance of Registers;</li> <li>• Follow up of EU activities;</li> <li>• Authorisation of Plant Protection Products;</li> <li>• Development of Maximum Residue Levels;</li> <li>• Authorisation of Premises for the sale of Plant Protection Products;</li> <li>• Review of applications for advertising of Plant Protection Products;</li> <li>• Participation in the elaboration of a monitoring plan;</li> <li>• Preparation of guidance documents and information material.</li> <li>• Shadowing of staff in the biocide area</li> </ul>	<p>Over the past years MSA-RAD staff has undergone training in their areas of their responsibility, and can be considered capable for their job at hand. All officials assigned with regulatory work within MSA are qualified professionals. Furthermore, all these officials have acquired considerable expertise in EU related matters, as well as in technical and scientific issues relevant to the areas under the respective regulatory unit's responsibility. All staff have benefited from past training under the EU-funded project for pre-accession assistance aimed at strengthening the operational capacity of MSA, including specialised training in implementing the "New and Global Approach", basic toxicology and risk assessment, which are the main technical and scientific tools employed by the MSA.</p>

### 13.3. Resources Available in Nongovernment Institutions for Chemicals and Related Waste Management

*Table 13.D: Resources Available in Nongovernment Institutions*

Concerned Institution	Specific Responsibilities for which Resources are Allocated	Number of Professional Staff Involved	Type of Expertise Available	Financial Resources Available (per year)
FoE Malta	Yearly campaigns are done in collaboration with FoE Europe. Past and current campaigns included waste, REACH, Climate change etc.	More than 5 according to what the campaign is related to.	Volunteers varies from students to Graduated Scientific personnel	According to what is required by the campaign.

### 13.4. Assessment and Comments

The lack of human and financial resources may negatively impact the local governments' capacity to perform the mandated functions concerning the management of chemicals.

## 14. Conclusions and Recommendations

The National Profile undoubtedly shows that although most of the information is available there is still some data missing. Some of the available data is fragmented among the various ministries/authorities concerned with the management of chemicals. It is necessary that the various entities state clearly what type of information is available and whether it is accessible. By knowing the type of existing data the authorities can identify the data gaps and whether the same data is asked by different authorities. By means of this exercise duplication of work among the authorities can be avoided.

One of the data gaps concerns the lack of information on the storage of chemicals. In order to address this problem the possibility of creating a notification mechanism that would enable the tracking of substances and mixtures being placed on the local market (irrespective of the tonnage and origin) is being investigated. Possibly, apart from the identity of the substance/mixture, the notification will include details on the quantities stored and consumed.

Certain information on chemicals is required by the various regulations dealing with the management and control of chemicals thus such data is usually made readily available. The legal instruments provide a very good basis to control chemicals. It has been noted, however, that to be able to better implement these legal instruments and to fully enforce the areas being covered there is an acute need for a greater availability of resources.

The National Profile raised an important issue on the need of establishing a poisons centre. According to the WHO, Malta is one of the four EU Member States that does not have a poison centre<sup>40</sup>. The Medicines and Poisons Information Service, at MDH, is providing a similar service to that offered by a poison centre, however, various important factors that enable the proper functioning of a poison centre are missing. One of these factors is the availability and accessibility of the right information. To be able to answer enquiries, the poisons information service needs to maintain a comprehensive collection of information about chemicals, pharmaceuticals, products, plants and venomous animals<sup>39</sup>. It also needs to develop treatment protocols and guidelines in order to ensure that the information and advice given is consistent. Lacking a readily available source would mean losing precious time in trying to identify the contents of the product and this can have fatal consequences. Various European Regulations and Directives require Member States to appoint body/bodies responsible for receiving information on the placing of the market of chemical products. A number of local competent authorities can contribute to an eventual poison centre by making readily available this useful information to local medical practitioners where suspected poisoning arises. The chemical database that will be developed as a result of the notification of products can therefore be used for the poison information service. Another proposed action is to provide a single source management service for chemical safety data sheets online so as to make this data readily available.

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<sup>40</sup> International Programme on Chemical Safety, WHO 2009, as retrieved on 10<sup>th</sup> November 2009, URL address: <http://www.who.int/ipcs/poisons/centre/directory/euro/en/>

With reference to the collection of data concerning accidents, a systematic process needs to be developed so that the various authorities concerned can be alerted immediately when an accident occurs.

A sub-committee within the E-REACH Committee can be created so as to be able to discuss data collection and co-ordination of work. The development of a project proposal, concerning the poison centre, should be prepared by the end of 2010. It is important to highlight that the Ministries involved need to provide resources in order for the poison centre to function as such.

One issue that needs to be tackled further is the use of raw materials in the manufacturing of pyrotechnics.

The other issues that were classified as high priorities include groundwater pollution, the lack of hazardous waste treatment facilities and environmental permitting.

As regards the issue on groundwater pollution there is a major concern on potential pollutants such as: pesticides; fuels; emerging substances; substances used in industries, such as shipyards; substances leached at end of use facilities and waste disposal sites; heavy metals from electroplating industry; and chemical wastes from industry and laboratories. Unfortunately the information on the location of the point sources of pollution could not be gathered, mainly due to a confidentiality reason. This needs to be tackled further with the respective authorities involved.

Fertilisers are the major indicated source of groundwater pollution. Considering that an inventory of fertilisers does not exist and thus no information is available on the fertilisers that are being placed on the local market, it is necessary to include fertilisers as one other group of chemical substances that will have to become notified.

Malta does not have all the relevant hazardous waste treatment facilities. In order to build these facilities and to cater them for specific hazardous waste there is the need of information relating to the type of generated waste. The problem related to the disposal of cytotoxic chemicals generated by the health services is currently being solved by exporting the stored material. Another major concern is the waste incinerator fly ash. There is no local treatment and so it is in the process of becoming exported.

With reference to environmental permitting, currently, there is work going on the sites which need a permit, including landfills, power stations and pharmaceutical industries. By means of these permits there is a better understanding of how the industry is handling and disposing of the chemicals, especially solvents.

The preparation of the national profile has definitely served as an important tool to improve communication skills among the entities that are concerned with the management of chemicals. There is a need to invest in educating the public to promote responsible chemical use. The authorities should further encourage all stakeholders concerned with the management of chemicals to participate in appropriate training activities in order to develop competency. All necessary actions



need to be taken so as to ensure the protection of human health and the environment in the economic and social development of Malta for the benefit of all of its inhabitants.

## ANNEX 1 Glossary

**Aarhus Convention:** is a new kind of environmental agreement. The Convention:

- Links environmental rights and human rights;
- Acknowledges that we owe an obligation to future generations;
- Establishes that sustainable development can be achieved only through the involvement of all stakeholders;
- Links government accountability and environmental protection; and
- Focuses on interactions between the public and public authorities in a democratic context.

The subject of the Convention goes to the heart of the relationship between people and governments. The Convention is not only an environmental agreement; it is also a Convention about government accountability, transparency and responsiveness. The Aarhus Convention grants the public rights and imposes on Parties and public authorities' obligations regarding access to information and public participation and access to justice. The Aarhus Convention is also forging a new process for public participation in the negotiation and implementation of international agreements.

**Biocidal Products:** active substances and preparations containing one or more active substances, put up in the form in which they are supplied to the user, intended to destroy, deter, render harmless, prevent the action of or otherwise exert a controlling effect on any harmful organism by chemical or biological means.

**Chemical Substance:** a chemical element and its compounds in the natural state or obtained by any manufacturing process, including any additive necessary to preserve its stability and any impurity deriving from the process used, but excluding any solvent which may be separated without affecting the stability of the substance or changing its composition.

**Chemical Mixture:** a mixture or solution composed of two or more substances.

**Cosmetic Product:** any substance or mixture intended to be placed in contact with the various external parts of the human body (epidermis, hair system, nails, lips and external genital organs) or with the teeth and the mucous membranes of the oral cavity with a view exclusively or mainly to cleaning them, perfuming them, changing their appearance, protecting them, keeping them in good condition, or correcting body odours.

**Detergent Product:** any substance or mixture containing soaps and/or other surfactants intended for washing and cleaning processes. Detergents may be in any form (liquid, powder, paste, bar, cake, molded piece, shape, etc.) and marketed for or used in household, or institutional or industrial purposes.

**Harmonized Commodity Description and Coding System (HS):** is an internationally standardized system of names and numbers for classifying traded products developed and maintained by the World Customs Organization (WCO). The HS is a six-digit nomenclature. The first four digits are referred to as the heading. The first six digits are known as a subheading. Countries that have adopted the Harmonized System are not permitted to alter in any way the descriptions associated to a heading or a subheading nor can the numerical codes at the four or six digit level be altered. This is what keeps the Harmonized System harmonized. Individual countries may extend a Harmonized System number to eight or ten digits for customs purposes, and to eight or ten digits for export purposes.

Intrastat: is the system for collecting statistics on the trade in goods between countries of the European Union (EU). It began operation on 1 January 1993, when it replaced customs declarations as the source of trade statistics within the EU. The requirements of Intrastat are similar in all member states of the EU.

NACE Code: is a pan-European classification system which groups organisations according to their business activities. It assigns a unique 5 or 6 digit code to each industry sector, for example, DA.15.83 - Manufacture of Sugar. Following is the list of categories:

Code	Category
A	Agriculture, hunting and forestry
B	Fishing
C	Mining and quarrying
D	Manufacturing
E	Electricity, gas and water supply
F	Construction
G	Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods
H	Hotels and restaurants
I	Transport, storage and communication
J	Financial intermediation
K	Real estate, renting and business activities
L	Public administration and defence; compulsory social security
M	Education
N	Health and social work
O	Other community, social and personal service activities
P	Private households with employed persons

Pesticides: anything that is intended to prevent, destroy, repel, attract or manage a pest. The pests may be insects, plant disease causing organisms, weeds, snails, slugs, rodents. Pesticides are grouped according to the pests they control, their chemical structure or how they work and affect the target pest. Insecticides, fungicides, herbicides and rodenticides are all different types of pesticides.

Plant Protection Products: include active substances and preparations containing one or more active substances, put up in the form in which they are supplied to the user, intended to protect plants or plant products against all harmful organisms or prevent the action of such organisms, influence the life processes of plants, other than as a nutrient, (e.g. growth regulators) and preserve plant products.

URBACT: An EU programme funded by the European Regional Development Fund. This programme aims to foster the exchange of experience amongst European cities and the capitalisation and dissemination of knowledge on sustainable urban development related issues.

ANNEX 2  
Additional Tables

A. Industrial, Agricultural, and Other Key Economic Sectors

*Table A.1: Analysis of Gross Value Added by Industry (A31) in Euros (€ '000)<sup>41</sup> (Years: 2006-2007) (Source: NSO, 2009)*

NACE <sup>42</sup> Rev 1.1 (A31)	Economic Sectors and related Activity	2006		
		Output (P.1)	Gross Value Added (B.1*g)	Contribution to Total GVA
AA	Agriculture, hunting and forestry	158,407	90,287	2.04
BB	Fishing	90,128	33,235	0.75
CA	Mining and quarrying of energy producing materials	7,072	1,975	0.04
CB	Mining and quarrying except energy producing materials	20,140	11,726	0.27
DA	Manufacture of food products; beverages and tobacco	347,414	104,472	2.37
DB	Manufacture of textiles and textile products	105,488	41,717	0.94
DC	Manufacture of leather and leather products	7,088	2,765	0.06
DD	Manufacture of wood and wood products	8,141	3,643	0.08
DE	Manufacture of pulp, paper and paper products; publishing and printing	178,668	66,052	1.50
DG	Manufacture of chemicals, chemical products and man-made fibres	161,896	88,383	2.00
DH	Manufacture of rubber and plastic products	97,209	43,126	0.98
DI	Manufacture of other non-metallic mineral products	77,836	30,217	0.68
DJ	Manufacture of basic metals and fabricated metal products	72,784	26,452	0.60
DK	Manufacture of machinery and equipment n.e.c.	40,717	13,401	0.30
DL	Manufacture of electrical and optical equipment	1,307,379	177,789	4.03
DM	Manufacture of transport equipment	87,850	27,687	0.63
DN	Manufacturing n.e.c.	177,934	97,347	2.20

<sup>41</sup> Data is provisional and in line with NSO's latest news release 102/2009 published on the 9<sup>th</sup> of June 2009

<sup>42</sup> The European Classification of Economic Activities (NACE) is the European reference framework for the production and the dissemination of statistics related to economic activities. NACE is identical with, or an extension of, the ISIC (International Standard Industrial Classification of all Economic Activities, UN Statistics Classifications)

EE	Electricity, gas and water supply	558,402	68,763	1.56
FF	Construction	408,167	172,628	3.91
GG	Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods	765,174	544,407	12.32
HH	Hotels and restaurants	547,221	234,118	5.30
II	Transport, storage and communication	980,135	418,817	9.48
JJ	Financial intermediation	546,769	219,082	4.96
KK	Real estate, renting and business activities	1,081,181	730,226	16.53
LL	Public administration and defence; compulsory social security	459,762	296,997	6.72
MM	Education	307,067	262,425	5.94
NN	Health and social work	356,438	262,984	5.95
OO	Other community, social and personal service activities	824,663	339,448	7.68
PP	Private households with employed persons	7,007	6,935	0.16
	<b>Total Economy</b>	<b>9,788,139</b>	<b>4,417,105</b>	

NACE Rev 1.1 (A31)	Economic Sectors and related Activity	2007		
		Output (P.1)	Gross Value Added (B.1*g)	Contribution to Total GVA
AA	Agriculture, hunting and forestry	154,799	79,752	1.68
BB	Fishing	119,210	43,093	0.91
CA	Mining and quarrying of energy producing materials	4,354	1,242	0.03
CB	Mining and quarrying except energy producing materials	20,743	12,087	0.25
DA	Manufacture of food products; beverages and tobacco	339,956	102,770	2.17
DB	Manufacture of textiles and textile products	85,465	35,632	0.75
DC	Manufacture of leather and leather products	5,737	2,241	0.05
DD	Manufacture of wood and wood products	9,930	4,444	0.09
DE	Manufacture of pulp, paper and paper products; publishing and printing	189,446	70,042	1.48
DG	Manufacture of chemicals, chemical products and man-made fibres	231,507	123,906	2.61
DH	Manufacture of rubber and plastic products	107,848	47,652	1.00

DI	Manufacture of other non-metallic mineral products	78,418	30,526	0.64
DJ	Manufacture of basic metals and fabricated metal products	81,973	29,283	0.62
DK	Manufacture of machinery and equipment n.e.c.	36,070	12,669	0.27
DL	Manufacture of electrical and optical equipment	1,239,611	215,008	4.53
DM	Manufacture of transport equipment	82,055	10,035	0.21
DN	Manufacturing n.e.c.	175,353	95,996	2.02
EE	Electricity, gas and water supply	577,345	74,263	1.57
FF	Construction	415,420	171,973	3.63
GG	Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods	788,244	557,177	11.75
HH	Hotels and restaurants	583,948	252,232	5.32
II	Transport, storage and communication	1,048,935	450,119	9.49
JJ	Financial intermediation	603,124	204,831	4.32
KK	Real estate, renting and business activities	1,109,776	796,306	16.79
LL	Public administration and defence; compulsory social security	485,201	316,161	6.67
MM	Education	318,323	274,833	5.80
NN	Health and social work	375,299	281,037	5.93
OO	Other community, social and personal service activities	977,661	439,262	9.26
PP	Private households with employed persons	7,202	7,130	0.15
	<b>Total Economy</b>	<b>10,252,955</b>	<b>4,741,701</b>	

B. Chemical Production, Import and Export

Table B.1: Imports Classified by CN Chapter and Region of Destination (2006- 2008) (Source: NSO, 2009)

Chapter	Region	CIF Value €			Tons		
		2006	2007	2008	2006	2007	2008
CHAPTER 27 - MINERAL FUELS, MINERAL OILS AND PRODUCTS OF THEIR DISTILLATION; BITUMINOUS SUBSTANCES; MINERAL WAXES	European Union	250,691,533	340,906,515	423,296,455	687,785.67	965,652.72	894,954.45
CHAPTER 27 - MINERAL FUELS, MINERAL OILS AND PRODUCTS OF THEIR DISTILLATION; BITUMINOUS SUBSTANCES; MINERAL WAXES	European Free Trade Area	15,967,536	3,463,689	5,487	57,201.67	17,913.24	0.53
CHAPTER 27 - MINERAL FUELS, MINERAL OILS AND PRODUCTS OF THEIR DISTILLATION; BITUMINOUS SUBSTANCES; MINERAL WAXES	Other Europe	1,990,839	16,025,750	97,288,541	4,208.29	46,226.53	109,267.28
CHAPTER 27 - MINERAL FUELS, MINERAL OILS AND PRODUCTS OF THEIR DISTILLATION; BITUMINOUS SUBSTANCES; MINERAL WAXES	Africa	28,797,002	4,330,327	41,702,691	121,178.41	9,526.07	61,836.19
CHAPTER 27 - MINERAL FUELS, MINERAL OILS AND PRODUCTS OF THEIR DISTILLATION; BITUMINOUS SUBSTANCES; MINERAL WAXES	North and Central America	74,765	11,162,509	56,367	62.27	39,248.18	419.44
CHAPTER 27 - MINERAL FUELS, MINERAL OILS AND PRODUCTS OF THEIR DISTILLATION; BITUMINOUS SUBSTANCES; MINERAL WAXES	Caribbean and Bahamas Islands	0	0	16,540	0.00	0.00	461.00

Chapter	Region	CIF Value €			Tons		
		2006	2007	2008	2006	2007	2008
CHAPTER 27 - MINERAL FUELS, MINERAL OILS AND PRODUCTS OF THEIR DISTILLATION; BITUMINOUS SUBSTANCES; MINERAL WAXES	South America	9,187,992	5,268,083	0	18,504.49	12,027.03	0.00
CHAPTER 27 - MINERAL FUELS, MINERAL OILS AND PRODUCTS OF THEIR DISTILLATION; BITUMINOUS SUBSTANCES; MINERAL WAXES	Asia	272,286	39,052,842	10,037,332	384.67	146,194.32	24,092.57
CHAPTER 27 - MINERAL FUELS, MINERAL OILS AND PRODUCTS OF THEIR DISTILLATION; BITUMINOUS SUBSTANCES; MINERAL WAXES	Australia & Oceania	23,555	0	8,659	38.31	0.00	13.31
CHAPTER 27 - MINERAL FUELS, MINERAL OILS AND PRODUCTS OF THEIR DISTILLATION; BITUMINOUS SUBSTANCES; MINERAL WAXES	Ships and Aircrafts	0	0	654,319	0.00	0.00	911.30
CHAPTER 28 - INORGANIC CHEMICALS; ORGANIC OR INORGANIC COMPOUNDS OF PRECIOUS METALS, OF RARE-EARTH METALS, OF RADIOACTIVE ELEMENTS OR OF ISOTOPES	European Union	3,163,483	3,440,093	3,089,058	8,089.56	6,836.10	6,405.30
CHAPTER 28 - INORGANIC CHEMICALS; ORGANIC OR INORGANIC COMPOUNDS OF PRECIOUS METALS, OF RARE-EARTH METALS, OF RADIOACTIVE ELEMENTS OR OF ISOTOPES	European Free Trade Area	6,417	81,452	156,404	2.02	32.91	55.97



Chapter	Region	CIF Value €			Tons		
		2006	2007	2008	2006	2007	2008
CHAPTER 28 - INORGANIC CHEMICALS; ORGANIC OR INORGANIC COMPOUNDS OF PRECIOUS METALS, OF RARE-EARTH METALS, OF RADIOACTIVE ELEMENTS OR OF ISOTOPES	Other Europe	1,575	0	19,948	8.00	0.00	20.63
CHAPTER 28 - INORGANIC CHEMICALS; ORGANIC OR INORGANIC COMPOUNDS OF PRECIOUS METALS, OF RARE-EARTH METALS, OF RADIOACTIVE ELEMENTS OR OF ISOTOPES	Africa	9,702	54,696	18,753	104.50	247.45	170.68
CHAPTER 28 - INORGANIC CHEMICALS; ORGANIC OR INORGANIC COMPOUNDS OF PRECIOUS METALS, OF RARE-EARTH METALS, OF RADIOACTIVE ELEMENTS OR OF ISOTOPES	North and Central America	54,194	108,119	105,568	30.45	44.43	7.48
CHAPTER 28 - INORGANIC CHEMICALS; ORGANIC OR INORGANIC COMPOUNDS OF PRECIOUS METALS, OF RARE-EARTH METALS, OF RADIOACTIVE ELEMENTS OR OF ISOTOPES	South America	366	0	0	0.02	0.00	0.00
CHAPTER 28 - INORGANIC CHEMICALS; ORGANIC OR INORGANIC COMPOUNDS OF PRECIOUS METALS, OF RARE-EARTH METALS, OF RADIOACTIVE ELEMENTS OR OF ISOTOPES	Asia	560,741	626,739	804,511	683.40	886.07	848.41

Chapter	Region	CIF Value €			Tons		
		2006	2007	2008	2006	2007	2008
CHAPTER 28 - INORGANIC CHEMICALS; ORGANIC OR INORGANIC COMPOUNDS OF PRECIOUS METALS, OF RARE-EARTH METALS, OF RADIOACTIVE ELEMENTS OR OF ISOTOPES	Australia & Oceania	0	314	0	0.00	0.02	0.00
CHAPTER 29 - ORGANIC CHEMICALS	European Union	16,286,413	21,553,595	21,090,683	3,725.95	3,401.66	4,355.12
CHAPTER 29 - ORGANIC CHEMICALS	European Free Trade Area	1,703,616	1,169,841	416,984	3.60	5.19	2.77
CHAPTER 29 - ORGANIC CHEMICALS	Other Europe	214,355	639,058	88,729	1.15	2.92	0.40
CHAPTER 29 - ORGANIC CHEMICALS	Africa	96	920	3,668	0.01	0.05	0.26
CHAPTER 29 - ORGANIC CHEMICALS	North and Central America	219,745	22,262,447	1,955,762	3.02	22.96	19.92
CHAPTER 29 - ORGANIC CHEMICALS	South America	48,380	68	111	0.06	0.00	0.00
CHAPTER 29 - ORGANIC CHEMICALS	Asia	18,785,973	25,774,580	35,469,554	373.44	359.55	384.24
CHAPTER 29 - ORGANIC CHEMICALS	Australia & Oceania	2,176	818	142,409	0.06	0.00	0.16
CHAPTER 29 - ORGANIC CHEMICALS	Ships and Aircrafts	0	101,447	0	0.00	0.17	0.00
CHAPTER 30 - PHARMACEUTICAL PRODUCTS	European Union	60,154,602	57,853,708	72,059,149	1,801.51	1,541.47	2,280.37
CHAPTER 30 - PHARMACEUTICAL PRODUCTS	European Free Trade Area	10,788,254	7,883,301	10,087,328	60.10	55.09	66.94
CHAPTER 30 - PHARMACEUTICAL PRODUCTS	Other Europe	1,473,902	193,908	164,176	7.25	4.28	1.00
CHAPTER 30 - PHARMACEUTICAL PRODUCTS	Africa	36,847	44,464	8,257	1.46	4.05	0.70

Chapter	Region	CIF Value €			Tons		
		2006	2007	2008	2006	2007	2008
CHAPTER 30 - PHARMACEUTICAL PRODUCTS	North and Central America	961,989	348,922	782,820	13.84	13.95	21.71
CHAPTER 30 - PHARMACEUTICAL PRODUCTS	Caribbean and Bahamas Islands	839,815	0	0	1.59	0.00	0.00
CHAPTER 30 - PHARMACEUTICAL PRODUCTS	South America	60,268	160,194	25,666	0.29	0.62	0.08
CHAPTER 30 - PHARMACEUTICAL PRODUCTS	Asia	1,303,676	364,025	988,580	36.76	41.63	47.14
CHAPTER 30 - PHARMACEUTICAL PRODUCTS	Australia & Oceania	2,167,053	2,053,224	3,186,447	8.17	11.04	19.77
CHAPTER 31 - FERTILISERS	European Union	3,279,315	1,077,118	1,309,813	4,666.08	3,746.76	2,739.24
CHAPTER 31 - FERTILISERS	European Free Trade Area	0	11,444	0	0.00	21.00	0.00
CHAPTER 31 - FERTILISERS	North and Central America	5,188	1,850	0	1.25	1.36	0.00
CHAPTER 31 - FERTILISERS	Asia	54,682	39,574	119,047	93.00	72.58	118.00
CHAPTER 32 - TANNING OR DYEING EXTRACTS; TANNINS AND THEIR DERIVATIVES; DYES, PIGMENTS AND OTHER COLOURING MATTER; PAINTS AND VARNISHES; PUTTY AND OTHER MASTICS; INKS	European Union	20,143,519	22,752,249	22,775,789	20,651.93	20,712.51	17,891.43

Chapter	Region	CIF Value €			Tons		
		2006	2007	2008	2006	2007	2008
CHAPTER 32 - TANNING OR DYEING EXTRACTS; TANNINS AND THEIR DERIVATIVES; DYES, PIGMENTS AND OTHER COLOURING MATTER; PAINTS AND VARNISHES; PUTTY AND OTHER MASTICS; INKS	European Free Trade Area	209,875	388,752	884,788	34.34	2.79	96.41
CHAPTER 32 - TANNING OR DYEING EXTRACTS; TANNINS AND THEIR DERIVATIVES; DYES, PIGMENTS AND OTHER COLOURING MATTER; PAINTS AND VARNISHES; PUTTY AND OTHER MASTICS; INKS	Other Europe	60,190	101,203	49,201	38.68	54.02	28.33
CHAPTER 32 - TANNING OR DYEING EXTRACTS; TANNINS AND THEIR DERIVATIVES; DYES, PIGMENTS AND OTHER COLOURING MATTER; PAINTS AND VARNISHES; PUTTY AND OTHER MASTICS; INKS	Africa	50,337	118,611	21,520	27.31	33.12	6.71
CHAPTER 32 - TANNING OR DYEING EXTRACTS; TANNINS AND THEIR DERIVATIVES; DYES, PIGMENTS AND OTHER COLOURING MATTER; PAINTS AND VARNISHES; PUTTY AND OTHER MASTICS; INKS	North and Central America	261,326	310,980	155,853	171.38	36.84	19.81
CHAPTER 32 - TANNING OR DYEING EXTRACTS; TANNINS AND THEIR DERIVATIVES; DYES, PIGMENTS AND OTHER COLOURING MATTER; PAINTS AND VARNISHES; PUTTY AND OTHER MASTICS; INKS	Asia	577,719	833,654	1,417,276	93.70	145.74	166.17

Chapter	Region	CIF Value €			Tons		
		2006	2007	2008	2006	2007	2008
CHAPTER 32 - TANNING OR DYEING EXTRACTS; TANNINS AND THEIR DERIVATIVES; DYES, PIGMENTS AND OTHER COLOURING MATTER; PAINTS AND VARNISHES; PUTTY AND OTHER MASTICS; INKS	Australia & Oceania	352	6,872	5,187	0.01	0.04	0.35
CHAPTER 32 - TANNING OR DYEING EXTRACTS; TANNINS AND THEIR DERIVATIVES; DYES, PIGMENTS AND OTHER COLOURING MATTER; PAINTS AND VARNISHES; PUTTY AND OTHER MASTICS; INKS	Ships and Aircrafts	0	0	2,041	0.00	0.00	0.01
CHAPTER 33 - ESSENTIAL OILS AND RESINOIDS; PERFUMERY, COSMETIC OR TOILET PREPARATIONS	European Union	35,346,828	36,032,968	37,193,283	4,542.42	3,733.59	4,212.26
CHAPTER 33 - ESSENTIAL OILS AND RESINOIDS; PERFUMERY, COSMETIC OR TOILET PREPARATIONS	European Free Trade Area	476,377	402,434	795,716	18.93	17.25	33.19
CHAPTER 33 - ESSENTIAL OILS AND RESINOIDS; PERFUMERY, COSMETIC OR TOILET PREPARATIONS	Other Europe	70,962	111,676	204,492	30.71	58.33	38.43
CHAPTER 33 - ESSENTIAL OILS AND RESINOIDS; PERFUMERY, COSMETIC OR TOILET PREPARATIONS	Africa	70,056	132,221	95,990	3.42	3.32	4.73
CHAPTER 33 - ESSENTIAL OILS AND RESINOIDS; PERFUMERY, COSMETIC OR TOILET PREPARATIONS	North and Central America	1,887,413	1,394,311	1,794,186	239.93	224.49	244.63
CHAPTER 33 - ESSENTIAL OILS AND RESINOIDS; PERFUMERY, COSMETIC OR TOILET PREPARATIONS	South America	0	256	4,126	0.00	0.00	0.59

Chapter	Region	CIF Value €			Tons		
		2006	2007	2008	2006	2007	2008
CHAPTER 33 - ESSENTIAL OILS AND RESINOIDS; PERFUMERY, COSMETIC OR TOILET PREPARATIONS	Asia	716,133	802,363	933,689	150.83	145.27	118.44
CHAPTER 33 - ESSENTIAL OILS AND RESINOIDS; PERFUMERY, COSMETIC OR TOILET PREPARATIONS	Australia & Oceania	92,618	92,293	86,042	7.10	6.98	7.59
CHAPTER 33 - ESSENTIAL OILS AND RESINOIDS; PERFUMERY, COSMETIC OR TOILET PREPARATIONS	Ships and Aircrafts	0	39,956	0	0.00	0.62	0.00
CHAPTER 34 - SOAP, ORGANIC SURFACE-ACTIVE AGENTS, WASHING PREPARATIONS, LUBRICATING PREPARATIONS, ARTIFICIAL WAXES, PREPARED WAXES, POLISHING OR SCOURING PREPARATIONS, CANDLES AND SIMILAR ARTICLES, MODELLING PASTES, 'DENTAL WAXES' AND DENTAL PREPARATIONS	European Union	16,348,510	17,272,496	18,746,551	10,759.83	11,039.77	14,522.94
CHAPTER 34 - SOAP, ORGANIC SURFACE-ACTIVE AGENTS, WASHING PREPARATIONS, LUBRICATING PREPARATIONS, ARTIFICIAL WAXES, PREPARED WAXES, POLISHING OR SCOURING PREPARATIONS, CANDLES AND SIMILAR ARTICLES, MODELLING PASTES, 'DENTAL WAXES' AND DENTAL PREPARATIONS	European Free Trade Area	25,618	33,880	57,530	2.82	5.01	8.75

Chapter	Region	CIF Value €			Tons		
		2006	2007	2008	2006	2007	2008
CHAPTER 34 - SOAP, ORGANIC SURFACE-ACTIVE AGENTS, WASHING PREPARATIONS, LUBRICATING PREPARATIONS, ARTIFICIAL WAXES, PREPARED WAXES, POLISHING OR SCOURING PREPARATIONS, CANDLES AND SIMILAR ARTICLES, MODELLING PASTES, 'DENTAL WAXES' AND DENTAL PREPARATIONS	Other Europe	27,548	144,736	121,418	38.15	150.89	110.57
CHAPTER 34 - SOAP, ORGANIC SURFACE-ACTIVE AGENTS, WASHING PREPARATIONS, LUBRICATING PREPARATIONS, ARTIFICIAL WAXES, PREPARED WAXES, POLISHING OR SCOURING PREPARATIONS, CANDLES AND SIMILAR ARTICLES, MODELLING PASTES, 'DENTAL WAXES' AND DENTAL PREPARATIONS	Africa	2,680	7,507	13,773	4.37	14.73	12.78
CHAPTER 34 - SOAP, ORGANIC SURFACE-ACTIVE AGENTS, WASHING PREPARATIONS, LUBRICATING PREPARATIONS, ARTIFICIAL WAXES, PREPARED WAXES, POLISHING OR SCOURING PREPARATIONS, CANDLES AND SIMILAR ARTICLES, MODELLING PASTES, 'DENTAL WAXES' AND DENTAL PREPARATIONS	North and Central America	311,476	379,645	356,982	102.66	137.62	103.46

Chapter	Region	CIF Value €			Tons		
		2006	2007	2008	2006	2007	2008
CHAPTER 34 - SOAP, ORGANIC SURFACE-ACTIVE AGENTS, WASHING PREPARATIONS, LUBRICATING PREPARATIONS, ARTIFICIAL WAXES, PREPARED WAXES, POLISHING OR SCOURING PREPARATIONS, CANDLES AND SIMILAR ARTICLES, MODELLING PASTES, 'DENTAL WAXES' AND DENTAL PREPARATIONS	South America	967	0	11,330	0.00	0.00	2.94
CHAPTER 34 - SOAP, ORGANIC SURFACE-ACTIVE AGENTS, WASHING PREPARATIONS, LUBRICATING PREPARATIONS, ARTIFICIAL WAXES, PREPARED WAXES, POLISHING OR SCOURING PREPARATIONS, CANDLES AND SIMILAR ARTICLES, MODELLING PASTES, 'DENTAL WAXES' AND DENTAL PREPARATIONS	Asia	241,743	426,486	361,548	149.58	336.95	199.73
CHAPTER 34 - SOAP, ORGANIC SURFACE-ACTIVE AGENTS, WASHING PREPARATIONS, LUBRICATING PREPARATIONS, ARTIFICIAL WAXES, PREPARED WAXES, POLISHING OR SCOURING PREPARATIONS, CANDLES AND SIMILAR ARTICLES, MODELLING PASTES, 'DENTAL WAXES' AND DENTAL PREPARATIONS	Australia & Oceania	87,096	72,741	61,505	25.39	25.40	14.83
CHAPTER 35 - ALBUMINOIDAL SUBSTANCES; MODIFIED STARCHES; GLUES; ENZYMES	European Union	2,443,818	2,394,667	2,621,871	1,722.96	1,745.92	1,714.66



Chapter	Region	CIF Value €			Tons		
		2006	2007	2008	2006	2007	2008
CHAPTER 35 - ALBUMINOIDAL SUBSTANCES; MODIFIED STARCHES; GLUES; ENZYMES	European Free Trade Area	2,206	5,944	1,919	0.19	0.65	0.26
CHAPTER 35 - ALBUMINOIDAL SUBSTANCES; MODIFIED STARCHES; GLUES; ENZYMES	Other Europe	5,788	5,604	10,803	1.07	1.33	11.15
CHAPTER 35 - ALBUMINOIDAL SUBSTANCES; MODIFIED STARCHES; GLUES; ENZYMES	Africa	0	219	0	0.00	0.03	0.00
CHAPTER 35 - ALBUMINOIDAL SUBSTANCES; MODIFIED STARCHES; GLUES; ENZYMES	North and Central America	44,629	28,840	350,347	16.69	1.41	102.38
CHAPTER 35 - ALBUMINOIDAL SUBSTANCES; MODIFIED STARCHES; GLUES; ENZYMES	South America	221,363	194,158	247,268	58.50	58.50	82.34
CHAPTER 35 - ALBUMINOIDAL SUBSTANCES; MODIFIED STARCHES; GLUES; ENZYMES	Asia	25,419	21,569	38,999	8.37	16.87	26.68
CHAPTER 35 - ALBUMINOIDAL SUBSTANCES; MODIFIED STARCHES; GLUES; ENZYMES	Australia & Oceania	15,933	14,618	2,512	7.17	5.91	1.34
CHAPTER 35 - ALBUMINOIDAL SUBSTANCES; MODIFIED STARCHES; GLUES; ENZYMES	Ships and Aircrafts	0	121	0	0.00	0.00	0.00
CHAPTER 36 - EXPLOSIVES; PYROTECHNIC PRODUCTS; MATCHES; PYROPHORIC ALLOYS; CERTAIN COMBUSTIBLE PREPARATIONS	European Union	230,973	271,578	291,366	75.44	46.15	70.30

Chapter	Region	CIF Value €			Tons		
		2006	2007	2008	2006	2007	2008
CHAPTER 36 - EXPLOSIVES; PYROTECHNIC PRODUCTS; MATCHES; PYROPHORIC ALLOYS; CERTAIN COMBUSTIBLE PREPARATIONS	European Free Trade Area	0	0	33	0.00	0.00	0.06
CHAPTER 36 - EXPLOSIVES; PYROTECHNIC PRODUCTS; MATCHES; PYROPHORIC ALLOYS; CERTAIN COMBUSTIBLE PREPARATIONS	Other Europe	12,579	0	0	6.60	0.00	0.00
CHAPTER 36 - EXPLOSIVES; PYROTECHNIC PRODUCTS; MATCHES; PYROPHORIC ALLOYS; CERTAIN COMBUSTIBLE PREPARATIONS	North and Central America	80,581	79,287	100,560	42.69	42.92	54.06
CHAPTER 36 - EXPLOSIVES; PYROTECHNIC PRODUCTS; MATCHES; PYROPHORIC ALLOYS; CERTAIN COMBUSTIBLE PREPARATIONS	Asia	30,561	67,590	36,248	18.20	37.88	21.60
CHAPTER 37 - PHOTOGRAPHIC OR CINEMATOGRAPHIC GOODS	European Union	3,426,524	3,433,336	2,788,319	408.13	403.06	1,278.84
CHAPTER 37 - PHOTOGRAPHIC OR CINEMATOGRAPHIC GOODS	European Free Trade Area	17,293	4,593	3,553	2.45	0.50	0.44
CHAPTER 37 - PHOTOGRAPHIC OR CINEMATOGRAPHIC GOODS	Other Europe	10,313	45,735	0	8.48	0.35	0.00
CHAPTER 37 - PHOTOGRAPHIC OR CINEMATOGRAPHIC GOODS	Africa	857	0	0	0.02	0.00	0.00

Chapter	Region	CIF Value €			Tons		
		2006	2007	2008	2006	2007	2008
CHAPTER 37 - PHOTOGRAPHIC OR CINEMATOGRAPHIC GOODS	North and Central America	436,928	352,408	215,359	56.42	45.66	29.21
CHAPTER 37 - PHOTOGRAPHIC OR CINEMATOGRAPHIC GOODS	Asia	125,254	71,784	54,438	18.34	10.22	5.64
CHAPTER 37 - PHOTOGRAPHIC OR CINEMATOGRAPHIC GOODS	Australia & Oceania	0	0	180	0.00	0.00	0.00
CHAPTER 38 - MISCELLANEOUS CHEMICAL PRODUCTS	European Union	12,491,484	12,797,315	13,979,041	7,466.06	8,155.99	8,327.70
CHAPTER 38 - MISCELLANEOUS CHEMICAL PRODUCTS	European Free Trade Area	410,709	173,096	218,591	22.93	4.57	12.52
CHAPTER 38 - MISCELLANEOUS CHEMICAL PRODUCTS	Other Europe	75,323	18,464	24,128	98.78	19.15	25.40
CHAPTER 38 - MISCELLANEOUS CHEMICAL PRODUCTS	Africa	181,254	6,779	361	39.59	2.96	0.04
CHAPTER 38 - MISCELLANEOUS CHEMICAL PRODUCTS	North and Central America	466,012	441,361	446,844	46.15	82.04	66.74
CHAPTER 38 - MISCELLANEOUS CHEMICAL PRODUCTS	South America	0	0	6	0.00	0.00	0.00
CHAPTER 38 - MISCELLANEOUS CHEMICAL PRODUCTS	Asia	1,114,003	935,156	1,166,873	333.13	331.42	375.57
CHAPTER 38 - MISCELLANEOUS CHEMICAL PRODUCTS	Australia & Oceania	8,550	4,977	874	0.07	0.02	0.02
CHAPTER 38 - MISCELLANEOUS CHEMICAL PRODUCTS	Ships and Aircrafts	0	6,869	0	0.00	0.82	0.00
CHAPTER 39 - PLASTICS AND ARTICLES THEREOF	European Union	86,948,200	97,883,620	88,697,782	33,525.19	29,347.64	31,586.68
CHAPTER 39 - PLASTICS AND ARTICLES THEREOF	European Free Trade Area	772,130	752,482	775,249	241.73	191.20	150.19

Chapter	Region	CIF Value €			Tons		
		2006	2007	2008	2006	2007	2008
CHAPTER 39 - PLASTICS AND ARTICLES THEREOF	Other Europe	945,773	2,075,968	1,991,025	279.53	917.71	683.93
CHAPTER 39 - PLASTICS AND ARTICLES THEREOF	Africa	852,697	735,582	860,639	207.50	180.27	233.79
CHAPTER 39 - PLASTICS AND ARTICLES THEREOF	North and Central America	3,920,163	5,654,266	5,985,793	1,044.90	1,334.37	1,438.76
CHAPTER 39 - PLASTICS AND ARTICLES THEREOF	Caribbean and Bahamas Islands	0	2,860	787	0.00	0.31	0.00
CHAPTER 39 - PLASTICS AND ARTICLES THEREOF	South America	27,155	7,154	6,541	8.18	1.30	0.54
CHAPTER 39 - PLASTICS AND ARTICLES THEREOF	Asia	33,131,421	39,961,746	35,390,224	8,709.54	10,919.60	13,580.78
CHAPTER 39 - PLASTICS AND ARTICLES THEREOF	Australia & Oceania	188,059	103,250	16,317	74.87	6.55	1.52
CHAPTER 39 - PLASTICS AND ARTICLES THEREOF	Ships and Aircrafts	0	867	0	0.00	0.14	0.00
Total		654,861,626	816,467,787	967,634,482	1,000,723.65	1,344,940.08	1,207,250.57

*Table B.2: Exports Classified by CN Chapter and Region of Destination (2006-2008) (Source: NSO, 2009)*

Chapter	Region	FOB Value €			Tons		
		2006	2007	2008	2006	2007	2008
CHAPTER 27 - MINERAL FUELS, MINERAL OILS AND PRODUCTS OF THEIR DISTILLATION; BITUMINOUS SUBSTANCES; MINERAL WAXES	European Union	2551873	18605770	3137626	1048.854	29678.224	6343.831

Chapter	Region	FOB Value €			Tons		
		2006	2007	2008	2006	2007	2008
CHAPTER 27 - MINERAL FUELS, MINERAL OILS AND PRODUCTS OF THEIR DISTILLATION; BITUMINOUS SUBSTANCES; MINERAL WAXES	European Free Trade Area	0	501	3312	0	0.23	1.627
CHAPTER 27 - MINERAL FUELS, MINERAL OILS AND PRODUCTS OF THEIR DISTILLATION; BITUMINOUS SUBSTANCES; MINERAL WAXES	Other Europe	1514	798404	3428443	3	2407.701	5803.733
CHAPTER 27 - MINERAL FUELS, MINERAL OILS AND PRODUCTS OF THEIR DISTILLATION; BITUMINOUS SUBSTANCES; MINERAL WAXES	Africa	2006732	7284382	2311786	10018.13	22809.466	2842.847
CHAPTER 27 - MINERAL FUELS, MINERAL OILS AND PRODUCTS OF THEIR DISTILLATION; BITUMINOUS SUBSTANCES; MINERAL WAXES	North and Central America	0	107	0	0	0.065	0
CHAPTER 27 - MINERAL FUELS, MINERAL OILS AND PRODUCTS OF THEIR DISTILLATION; BITUMINOUS SUBSTANCES; MINERAL WAXES	Asia	4385008	4013	0	12800	0.335	0
CHAPTER 27 - MINERAL FUELS, MINERAL OILS AND PRODUCTS OF THEIR DISTILLATION; BITUMINOUS SUBSTANCES; MINERAL WAXES	Australia & Oceania	0	1054437	0	0	2481.52	0
CHAPTER 27 - MINERAL FUELS, MINERAL OILS AND PRODUCTS OF THEIR DISTILLATION; BITUMINOUS SUBSTANCES; MINERAL WAXES	Ships and Aircrafts	21107002	24288024	34641060	37454.005	41820.824	45280.139
CHAPTER 28 - INORGANIC CHEMICALS; ORGANIC OR INORGANIC COMPOUNDS OF PRECIOUS METALS, OF RARE-EARTH METALS, OF RADIOACTIVE ELEMENTS OR OF ISOTOPES	European Union	16356	2735	46174	7.375	0.704	39.75
CHAPTER 28 - INORGANIC CHEMICALS; ORGANIC OR INORGANIC COMPOUNDS OF PRECIOUS METALS, OF RARE-EARTH METALS, OF RADIOACTIVE ELEMENTS OR OF ISOTOPES	European Free Trade Area	0	0	580	0	0	0.3

Chapter	Region	FOB Value €			Tons		
		2006	2007	2008	2006	2007	2008
CHAPTER 28 - INORGANIC CHEMICALS; ORGANIC OR INORGANIC COMPOUNDS OF PRECIOUS METALS, OF RARE-EARTH METALS, OF RADIOACTIVE ELEMENTS OR OF ISOTOPES	Other Europe	0	135	136	0	0.034	0.034
CHAPTER 28 - INORGANIC CHEMICALS; ORGANIC OR INORGANIC COMPOUNDS OF PRECIOUS METALS, OF RARE-EARTH METALS, OF RADIOACTIVE ELEMENTS OR OF ISOTOPES	Africa	37766	408122	24322	14.695	6.775	6.463
CHAPTER 28 - INORGANIC CHEMICALS; ORGANIC OR INORGANIC COMPOUNDS OF PRECIOUS METALS, OF RARE-EARTH METALS, OF RADIOACTIVE ELEMENTS OR OF ISOTOPES	North and Central America	0	868	31661	0	2.28	0.02
CHAPTER 28 - INORGANIC CHEMICALS; ORGANIC OR INORGANIC COMPOUNDS OF PRECIOUS METALS, OF RARE-EARTH METALS, OF RADIOACTIVE ELEMENTS OR OF ISOTOPES	South America	0	1747	0	0	0.025	0
CHAPTER 28 - INORGANIC CHEMICALS; ORGANIC OR INORGANIC COMPOUNDS OF PRECIOUS METALS, OF RARE-EARTH METALS, OF RADIOACTIVE ELEMENTS OR OF ISOTOPES	Asia	101558	147601	100275	38.568	71.194	54.295
CHAPTER 28 - INORGANIC CHEMICALS; ORGANIC OR INORGANIC COMPOUNDS OF PRECIOUS METALS, OF RARE-EARTH METALS, OF RADIOACTIVE ELEMENTS OR OF ISOTOPES	Ships and Aircrafts	0	0	76	0	0	0.345
CHAPTER 29 - ORGANIC CHEMICALS	European Union	1962318	1984149	2447895	10.205	3.136	7.087
CHAPTER 29 - ORGANIC CHEMICALS	European Free Trade Area	3668201	719801	2450989	2.159	0.59	1.793
CHAPTER 29 - ORGANIC CHEMICALS	Other Europe	85022	903808	1015117	12.806	0.725	3.079
CHAPTER 29 - ORGANIC CHEMICALS	Africa	137277	438914	55382	4.235	3.205	2.638

Chapter	Region	FOB Value €			Tons		
		2006	2007	2008	2006	2007	2008
CHAPTER 29 - ORGANIC CHEMICALS	North and Central America	4936132	9851142	7652755	5.611	8.751	9.226
CHAPTER 29 - ORGANIC CHEMICALS	South America	0	13724	22585	0	0.207	0.123
CHAPTER 29 - ORGANIC CHEMICALS	Asia	5607878	6371130	5501913	31.586	34.392	38.013
CHAPTER 29 - ORGANIC CHEMICALS	Australia & Oceania	22546	0	198797	1.89	0	0.031
CHAPTER 30 - PHARMACEUTICAL PRODUCTS	European Union	92744021	125333972	116923983	807.444	1208.966	1419.48
CHAPTER 30 - PHARMACEUTICAL PRODUCTS	European Free Trade Area	5107098	6117884	5415634	29.229	36.246	45.97
CHAPTER 30 - PHARMACEUTICAL PRODUCTS	Other Europe	752366	3112957	6786297	4.775	23.867	41.2
CHAPTER 30 - PHARMACEUTICAL PRODUCTS	Africa	719203	697976	1864998	12.432	9.286	33.942
CHAPTER 30 - PHARMACEUTICAL PRODUCTS	North and Central America	138201	11559588	30834733	2.132	78.53	387.707
CHAPTER 30 - PHARMACEUTICAL PRODUCTS	Caribbean and Bahamas Islands	374523	0	0	0.385	0	0
CHAPTER 30 - PHARMACEUTICAL PRODUCTS	South America	32314	19588	83969	18.162	0.311	0.676
CHAPTER 30 - PHARMACEUTICAL PRODUCTS	Asia	2090537	2777546	3639380	8.903	7.074	12.679
CHAPTER 30 - PHARMACEUTICAL PRODUCTS	Australia & Oceania	789070	2213141	2358696	4.615	12.958	20.242
CHAPTER 30 - PHARMACEUTICAL PRODUCTS	Ships and Aircrafts	0	7423	577	0	0.239	0.014
CHAPTER 31 - FERTILISERS	Africa	29741	147	0	24	0.002	0
CHAPTER 31 - FERTILISERS	Ships and Aircrafts	0	0	253	0	0	0.09

Chapter	Region	FOB Value €			Tons		
		2006	2007	2008	2006	2007	2008
CHAPTER 32 - TANNING OR DYEING EXTRACTS; TANNINS AND THEIR DERIVATIVES; DYES, PIGMENTS AND OTHER COLOURING MATTER; PAINTS AND VARNISHES; PUTTY AND OTHER MASTICS; INKS	European Union	992660	868115	1197987	78.417	128.662	115.96
CHAPTER 32 - TANNING OR DYEING EXTRACTS; TANNINS AND THEIR DERIVATIVES; DYES, PIGMENTS AND OTHER COLOURING MATTER; PAINTS AND VARNISHES; PUTTY AND OTHER MASTICS; INKS	European Free Trade Area	0	41386	5047	0	3.655	0.112
CHAPTER 32 - TANNING OR DYEING EXTRACTS; TANNINS AND THEIR DERIVATIVES; DYES, PIGMENTS AND OTHER COLOURING MATTER; PAINTS AND VARNISHES; PUTTY AND OTHER MASTICS; INKS	Other Europe	1160	135	5231	0.318	0.05	0.09
CHAPTER 32 - TANNING OR DYEING EXTRACTS; TANNINS AND THEIR DERIVATIVES; DYES, PIGMENTS AND OTHER COLOURING MATTER; PAINTS AND VARNISHES; PUTTY AND OTHER MASTICS; INKS	Africa	1247431	2072328	1182406	475.081	808.414	454.558
CHAPTER 32 - TANNING OR DYEING EXTRACTS; TANNINS AND THEIR DERIVATIVES; DYES, PIGMENTS AND OTHER COLOURING MATTER; PAINTS AND VARNISHES; PUTTY AND OTHER MASTICS; INKS	North and Central America	0	263	10634	0	0.01	0.505



Chapter	Region	FOB Value €			Tons		
		2006	2007	2008	2006	2007	2008
CHAPTER 32 - TANNING OR DYEING EXTRACTS; TANNINS AND THEIR DERIVATIVES; DYES, PIGMENTS AND OTHER COLOURING MATTER; PAINTS AND VARNISHES; PUTTY AND OTHER MASTICS; INKS	South America	0	5236	0	0	0.04	0
CHAPTER 32 - TANNING OR DYEING EXTRACTS; TANNINS AND THEIR DERIVATIVES; DYES, PIGMENTS AND OTHER COLOURING MATTER; PAINTS AND VARNISHES; PUTTY AND OTHER MASTICS; INKS	Asia	348012	637247	663801	51.89	70.195	221.152
CHAPTER 32 - TANNING OR DYEING EXTRACTS; TANNINS AND THEIR DERIVATIVES; DYES, PIGMENTS AND OTHER COLOURING MATTER; PAINTS AND VARNISHES; PUTTY AND OTHER MASTICS; INKS	Ships and Aircrafts	0	94793	109317	0	19.387	19.228
CHAPTER 33 - ESSENTIAL OILS AND RESINOIDS; PERFUMERY, COSMETIC OR TOILET PREPARATIONS	European Union	1078989	3816590	2462516	159.906	175.655	106.324
CHAPTER 33 - ESSENTIAL OILS AND RESINOIDS; PERFUMERY, COSMETIC OR TOILET PREPARATIONS	European Free Trade Area	0	610	5046	0	0.004	0.28
CHAPTER 33 - ESSENTIAL OILS AND RESINOIDS; PERFUMERY, COSMETIC OR TOILET PREPARATIONS	Other Europe	150782	0	12000	3.864	0	0.152
CHAPTER 33 - ESSENTIAL OILS AND RESINOIDS; PERFUMERY, COSMETIC OR TOILET PREPARATIONS	Africa	4157415	3013763	3827151	413.957	336.098	480.198

Chapter	Region	FOB Value €			Tons		
		2006	2007	2008	2006	2007	2008
CHAPTER 33 - ESSENTIAL OILS AND RESINOIDS; PERFUMERY, COSMETIC OR TOILET PREPARATIONS	North and Central America	510452	638421	114768	13.594	4.026	0.629
CHAPTER 33 - ESSENTIAL OILS AND RESINOIDS; PERFUMERY, COSMETIC OR TOILET PREPARATIONS	South America	83923	811196	91428	2.045	6.173	1.013
CHAPTER 33 - ESSENTIAL OILS AND RESINOIDS; PERFUMERY, COSMETIC OR TOILET PREPARATIONS	Asia	1128748	1119345	928157	140.467	131.855	131.982
CHAPTER 33 - ESSENTIAL OILS AND RESINOIDS; PERFUMERY, COSMETIC OR TOILET PREPARATIONS	Australia & Oceania	81	23	0	0.04	0.006	0
CHAPTER 34 - SOAP, ORGANIC SURFACE-ACTIVE AGENTS, WASHING PREPARATIONS, LUBRICATING PREPARATIONS, ARTIFICIAL WAXES, PREPARED WAXES, POLISHING OR SCOURING PREPARATIONS, CANDLES AND SIMILAR ARTICLES, MODELLING PASTES, 'DENTAL WAXES' AND DENTAL PREPARATIONS	European Union	3353444	3024263	1708028	443.466	319.444	303.318
CHAPTER 34 - SOAP, ORGANIC SURFACE-ACTIVE AGENTS, WASHING PREPARATIONS, LUBRICATING PREPARATIONS, ARTIFICIAL WAXES, PREPARED WAXES, POLISHING OR SCOURING PREPARATIONS, CANDLES AND SIMILAR ARTICLES, MODELLING PASTES, 'DENTAL WAXES' AND DENTAL PREPARATIONS	Africa	132404	163669	117388	51.796	84.166	98.571

Chapter	Region	FOB Value €			Tons		
		2006	2007	2008	2006	2007	2008
CHAPTER 34 - SOAP, ORGANIC SURFACE-ACTIVE AGENTS, WASHING PREPARATIONS, LUBRICATING PREPARATIONS, ARTIFICIAL WAXES, PREPARED WAXES, POLISHING OR SCOURING PREPARATIONS, CANDLES AND SIMILAR ARTICLES, MODELLING PASTES, 'DENTAL WAXES' AND DENTAL PREPARATIONS	North and Central America	1347579	3061058	442167	100.223	166.451	52.76
CHAPTER 34 - SOAP, ORGANIC SURFACE-ACTIVE AGENTS, WASHING PREPARATIONS, LUBRICATING PREPARATIONS, ARTIFICIAL WAXES, PREPARED WAXES, POLISHING OR SCOURING PREPARATIONS, CANDLES AND SIMILAR ARTICLES, MODELLING PASTES, 'DENTAL WAXES' AND DENTAL PREPARATIONS	Caribbean and Bahamas Islands	0	71612	0	0	12.013	0
CHAPTER 34 - SOAP, ORGANIC SURFACE-ACTIVE AGENTS, WASHING PREPARATIONS, LUBRICATING PREPARATIONS, ARTIFICIAL WAXES, PREPARED WAXES, POLISHING OR SCOURING PREPARATIONS, CANDLES AND SIMILAR ARTICLES, MODELLING PASTES, 'DENTAL WAXES' AND DENTAL PREPARATIONS	South America	538468	2413192	439496	70.792	177.04	62.31
CHAPTER 34 - SOAP, ORGANIC SURFACE-ACTIVE AGENTS, WASHING PREPARATIONS, LUBRICATING PREPARATIONS, ARTIFICIAL WAXES, PREPARED WAXES, POLISHING OR SCOURING PREPARATIONS, CANDLES AND SIMILAR ARTICLES, MODELLING PASTES, 'DENTAL WAXES' AND DENTAL PREPARATIONS	Asia	25135	0	2885	2.116	0	0.5

Chapter	Region	FOB Value €			Tons		
		2006	2007	2008	2006	2007	2008
CHAPTER 34 - SOAP, ORGANIC SURFACE-ACTIVE AGENTS, WASHING PREPARATIONS, LUBRICATING PREPARATIONS, ARTIFICIAL WAXES, PREPARED WAXES, POLISHING OR SCOURING PREPARATIONS, CANDLES AND SIMILAR ARTICLES, MODELLING PASTES, 'DENTAL WAXES' AND DENTAL PREPARATIONS	Ships and Aircrafts	0	4363	191	0	0.333	0.009
CHAPTER 35 - ALBUMINOIDAL SUBSTANCES; MODIFIED STARCHES; GLUES; ENZYMES	European Union	29713	61996	4101	2.524	28.411	0.743
CHAPTER 35 - ALBUMINOIDAL SUBSTANCES; MODIFIED STARCHES; GLUES; ENZYMES	Africa	37223	53680	63193	16.075	35.235	46.01
CHAPTER 35 - ALBUMINOIDAL SUBSTANCES; MODIFIED STARCHES; GLUES; ENZYMES	North and Central America	9	82	0	0.009	0.025	0
CHAPTER 35 - ALBUMINOIDAL SUBSTANCES; MODIFIED STARCHES; GLUES; ENZYMES	Asia	0	7864	37534	0	12	23.551
CHAPTER 36 - EXPLOSIVES; PYROTECHNIC PRODUCTS; MATCHES; PYROPHORIC ALLOYS; CERTAIN COMBUSTIBLE PREPARATIONS	European Union	0	0	1669	0	0	0.571
CHAPTER 36 - EXPLOSIVES; PYROTECHNIC PRODUCTS; MATCHES; PYROPHORIC ALLOYS; CERTAIN COMBUSTIBLE PREPARATIONS	Africa	0	1461	0	0	0.005	0
CHAPTER 37 - PHOTOGRAPHIC OR CINEMATOGRAPHIC GOODS	European Union	14019	12537	117191	0.746	1.025	11.109
CHAPTER 37 - PHOTOGRAPHIC OR CINEMATOGRAPHIC GOODS	Other Europe	0	4850	0	0	0.5	0
CHAPTER 37 - PHOTOGRAPHIC OR CINEMATOGRAPHIC GOODS	Africa	85678	184960	110566	6.788	26.97	12.091

Chapter	Region	FOB Value €			Tons		
		2006	2007	2008	2006	2007	2008
CHAPTER 37 - PHOTOGRAPHIC OR CINEMATOGRAPHIC GOODS	North and Central America	10506	680	0	1.7	0.06	0
CHAPTER 37 - PHOTOGRAPHIC OR CINEMATOGRAPHIC GOODS	Caribbean and Bahamas Islands	89809	0	0	9	0	0
CHAPTER 37 - PHOTOGRAPHIC OR CINEMATOGRAPHIC GOODS	Asia	3585	2460	80	0.309	0.195	0.018
CHAPTER 38 - MISCELLANEOUS CHEMICAL PRODUCTS	European Union	952398	1124320	2044179	964.684	534.885	328.34
CHAPTER 38 - MISCELLANEOUS CHEMICAL PRODUCTS	European Free Trade Area	4409	4275	2582	0.142	0.142	0.02
CHAPTER 38 - MISCELLANEOUS CHEMICAL PRODUCTS	Other Europe	1845	68597	313	0.4	17.35	0.096
CHAPTER 38 - MISCELLANEOUS CHEMICAL PRODUCTS	Africa	626828	370808	4339596	212.73	170.402	1421.846
CHAPTER 38 - MISCELLANEOUS CHEMICAL PRODUCTS	North and Central America	10499	43504	1014953	0.866	0.347	43.328
CHAPTER 38 - MISCELLANEOUS CHEMICAL PRODUCTS	South America	0	0	1412593	0	0	83.05
CHAPTER 38 - MISCELLANEOUS CHEMICAL PRODUCTS	Asia	56900	69842	70739	62.311	104.093	19.657
CHAPTER 38 - MISCELLANEOUS CHEMICAL PRODUCTS	Australia & Oceania	0	0	171	0	0	0.004
CHAPTER 38 - MISCELLANEOUS CHEMICAL PRODUCTS	Ships and Aircrafts	0	568	4704	0	0.02	0.453
CHAPTER 39 - PLASTICS AND ARTICLES THEREOF	European Union	26216828	31942725	37963082	2227.232	2755.286	3828.422

Chapter	Region	FOB Value €			Tons		
		2006	2007	2008	2006	2007	2008
CHAPTER 39 - PLASTICS AND ARTICLES THEREOF	European Free Trade Area	7225	75530	207820	6.573	9.163	19.26
CHAPTER 39 - PLASTICS AND ARTICLES THEREOF	Other Europe	57641	275822	935556	22.04	28.203	71.586
CHAPTER 39 - PLASTICS AND ARTICLES THEREOF	Africa	4284809	3939838	4340614	562.617	565.675	634.321
CHAPTER 39 - PLASTICS AND ARTICLES THEREOF	North and Central America	4768501	5011413	6909846	260.84	228.994	320.161
CHAPTER 39 - PLASTICS AND ARTICLES THEREOF	Caribbean and Bahamas Islands	185369	444156	1009547	54.492	103.59	220.159
CHAPTER 39 - PLASTICS AND ARTICLES THEREOF	South America	151669	98638	29763	13.122	3.73	8.361
CHAPTER 39 - PLASTICS AND ARTICLES THEREOF	Asia	2838995	3349073	5965845	2371.955	2606.466	3035.676
CHAPTER 39 - PLASTICS AND ARTICLES THEREOF	Australia & Oceania	24548	18728	19453	0.344	1.184	2.417
CHAPTER 39 - PLASTICS AND ARTICLES THEREOF	Ships and Aircrafts	0	1785	0	0	0.185	0
Total		204,959,946	293,747,536	310,910,738	71,170.67	110,385.68	74,578.28

### C. Market & Transport Restrictions

Table C.1: Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles

Designation of the substance, of the groups of substances or of the preparation	Conditions of restriction
Polychlorinated terphenyls (PCTs)	<p>Shall not be used. However, the following use of equipment, installations and fluids which were in service on 30 June 1986 shall continue to be permitted until they are disposed of or reach the end of their service life:</p> <ul style="list-style-type: none"> <li>(a) closed-system electrical equipment transformers, resistors and inductors;</li> <li>(b) large condensers (<math>\geq 1</math> kg total weight);</li> <li>(c) small condensers;</li> <li>(d) heat-transmitting fluids in closed circuit heat transfer installations;</li> <li>(e) hydraulic fluids for underground mining equipment.</li> </ul>
Chloro-1-ethylene (monomer vinyl chloride) CAS No 75-01-4 EINECS No 200-831-0	<p>Shall not be used as aerosol propellant for any use.</p>
Liquid substances or preparations, which are regarded as dangerous according to the definitions in Council Directive 67/548/EEC and Directive 1999/45/EC.	<p>Shall not be used in:</p> <ul style="list-style-type: none"> <li>– ornamental objects, intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,</li> <li>– tricks and jokes,</li> <li>– games for one or more participants, or any object intended to be used as such, even with ornamental aspects.</li> </ul> <p>Without prejudice to paragraph 1, substances and preparations which:</p> <ul style="list-style-type: none"> <li>– present an aspiration hazard and are labeled with R65, and</li> <li>– can be used as fuel in decorative lamps, and</li> <li>– are placed on the market in packaging of a capacity of 15 litres or less, shall not contain a colouring agent, unless required for fiscal reasons, or perfume or both.</li> </ul>
Tris (2,3 dibromopropyl) phosphate CAS No 126-72-7	<p>Shall not be used in textile articles, such as garments, undergarments and linen, intended to come into contact with the skin.</p>

Designation of the substance, of the groups of substances or of the preparation	Conditions of restriction
Benzene CAS No 71-43-2 EINECS No 200-753-785	Not permitted in toys or parts of toys as placed on the market where the concentration of benzene in the free state is in excess of 5 mg/kg of the weight of the toy or part of toy. Shall not be used in concentrations equal to, or greater than, 0,1 % by mass in substances or preparations placed on the market, however, the latter shall not apply to: (a) motor fuels which are covered by Directive 98/70/EC; (b) substances and preparations for use in industrial processes not allowing for the emission of benzene in quantities in excess of those laid down in existing legislation; (c) waste covered by Council Directive 91/689/EEC of 12 December 1991 on hazardous waste and Directive 2006/12/EC.
Asbestos fibres (a) Crocidolite CAS No 12001-28-4 (b) Amosite CAS No 12172-73-5 (c) Anthophyllite CAS No 77536-67-5 (d) Actinolite CAS No 77536-66-4 (e) Tremolite CAS No 77536-68-6 (f) Chrysotile (2) CAS No 12001-29-5 CAS No 132207-32-0	The placing on the market and use of these fibres and of articles containing these fibres added intentionally shall be prohibited. However, Member States may except the placing on the market and use of diaphragms containing chrysotile (point (f)) for existing electrolysis installations until they reach the end of their service life, or until suitable asbestos-free substitutes become available, whichever is the sooner.
Tris(aziridinyl)phosphin oxide CAS No 5455-55-1	Shall not be used in textile articles, such as garments, undergarments and linen, intended to come into contact with the skin.
Polybromobiphenyls; Polybrominatedbiphenyls (PBB) CAS No 59536-65-1	



Designation of the substance, of the groups of substances or of the preparation	Conditions of restriction
<p>Soap bark powder (<i>Quillaja saponaria</i>) and its derivatives containing saponines  Powder of the roots of <i>Helleborus viridis</i> and <i>Helleborus niger</i>  Powder of the roots of <i>Veratrum album</i> and <i>Veratrum nigrum</i>  Benzidine and/or its derivatives  CAS No 92-87-5  EINECS No 202-199-1</p> <p><i>o</i>-Nitrobenzaldehyde  CAS No 552-89-6</p> <p>Wood powder</p>	<p>Shall not be used in jokes and hoaxes or in objects intended to be used as such, for instance as a constituent of sneezing powder and stink bombs.</p>
<p>Ammonium sulphide  CAS No 12135-76-1  Ammonium hydrogen sulphide  CAS No 12124-99-1  Ammonium polysulphide  CAS No 9080-17-5  EINECS No 232-989-1</p>	
<p>Volatile esters of bromoacetic acids:  Methyl bromoacetate  CAS No 96-32-2  EINECS No 202-499-2  Ethyl bromoacetate  CAS No 105-36-2  EINECS No 203-290-9  Propyl bromoacetate  CAS No 35223-80-4  Butyl bromoacetate</p>	
<p>2-Naphthylamine  CAS No 91-59-8  EINECS No 202-080-4</p>	<p>Shall not be used in concentrations equal to or greater than 0,1 % by weight in substances and preparations placed on the market. However, this provision shall not apply to waste containing one or more of these</p>

Designation of the substance, of the groups of substances or of the preparation	Conditions of restriction
and its salts	substances and covered by Directives 91/689/EEC and 2006/12/EC.
Benzidine CAS No 92-87-5 EINECS No 202-199-1 and its salts	
4-Nitrobiphenyl CAS No 92-93-3 EINECS No 202-204-7	
4-Aminobiphenyl xenylamine CAS No 92-67-1 EINECS No 202-177-1 and its salts	
Lead carbons: (a) Neutral anhydrous carbonate ( $\text{PbCO}_3$ ) CAS No 598-63-0 EINECS No 209-943-4 (b) Trilead-bis(carbonate)-dihydroxide $2 \text{PbCO}_3 \cdot \text{Pb}(\text{OH})_2$ CAS No 1319-46-6 EINECS No 215-290-6	Shall not be used as substances and a constituent of preparations intended for use as paints, except for the restoration and maintenance of works of art and historic buildings and their interiors.
Lead sulphates (a) $\text{PbSO}_4$ (1:1) CAS No 7446-14-2 EINECS No 231-198-9 (b) $\text{Pb}_x \text{SO}_4$ CAS No 15739-80-7 EINECS No 239-831-0	
Mercury compounds	Shall not be used as substances and constituents of preparations intended for use: (a) to prevent the fouling by micro-organisms, plants or animals of: – the hulls of boats,

Designation of the substance, of the groups of substances or of the preparation	Conditions of restriction
	<p>– cages, floats, nets and any other appliances or equipment used for fish or shellfish farming,</p> <p>– any totally or partly submerged appliances or equipment;</p> <p>(b) in the preservation of wood;</p> <p>(c) in the impregnation of heavy-duty industrial textiles and yarn intended for their manufacture;</p> <p>(d) in the treatment of industrial waters, irrespective of their use.</p> <p>The placing on the market of batteries and accumulators, containing more than 0,0005 % of mercury by weight, including in those cases where these batteries and accumulators are incorporated into appliances shall be prohibited. Button cells and batteries composed of button cells with a mercury content of no more than 2 % by weight shall be exempted from this prohibition.</p>
Arsenic compounds	<p>Shall not be used as substances and constituents of preparations intended for use:</p> <p>(a) to prevent the fouling by micro-organisms, plants or animals of:</p> <p>– the hulls of boats,</p> <p>– cages, floats, nets and any other appliances or equipment used for fish or shellfish farming,</p> <p>– any totally or partly submerged appliances or equipment;</p> <p>(b) in the preservation of wood.</p> <p>Shall not be used as substances and constituents of preparations intended for use in the treatment of industrial waters, irrespective of their use.</p>
Organostannic compounds	<p>Shall not be placed on the market for use as substances and constituents of preparations when acting: as biocides in free association paint; as biocides to prevent the fouling by microorganisms, plants or animals.</p> <p>Shall not be used as substances and constituents of preparations intended for use in the treatment of industrial waters.</p>
Di- $\mu$ -oxo-di-n-butylstanniohydroxyborane dibutyltin hydrogen borate $C_8H_{19}BO_3Sn$ (DBB) CAS No 75113-37-0	Shall be prohibited in a concentration equal to or greater than 0,1 % in substances and constituents of preparations placed on the market.

Designation of the substance, of the groups of substances or of the preparation	Conditions of restriction
ELINCS No 401-040-5	
Pentachlorophenol CAS No 87-86-5 EINECS No 201-778-6 and its salts and esters	Shall not be used in a concentration equal to or greater than 0,1 % by mass in substances or preparations placed on the market.
Cadmium CAS No 7440-43-9 EINECS No 231-152-8 and its compounds	Shall not be used to give colour to finished articles manufactured from the substances and Preparations.
Monomethyl – tetrachlorodiphenyl methane Trade name: Ugilec 141 CAS No 76253-60-6	The placing on the market and use of this substance and of preparations and articles containing it shall be prohibited.
Monomethyl-dichloro-diphenyl methane Trade name: Ugilec 121, Ugilec 21; CAS No – unknown	The placing on the market and use of this substance and of preparations and articles containing it shall be prohibited.
Monomethyl-dibromo-diphenyl methane bromobenzylbromotoluene, mixture of isomers Trade name: DBBT CAS No 99688-47-8	The placing on the market and use of this substance and of preparations and articles containing it shall be prohibited.
Nickel CAS No 7440-02-0 EINECS No 231-111-4 and its compounds	Shall not be used: (a) in all post assemblies which are inserted into pierced ears and other pierced parts of the human body unless the rate of nickel release from such post assemblies is less than 0,2 µg/cm <sup>2</sup> /week (migration limit); (b) in articles intended to come into direct and prolonged contact with the skin such as: earrings, necklaces, bracelets and chains, anklets, finger rings, etc. (c) in articles such as those listed in point (b) where these have a non-nickel coating unless such coating is sufficient to ensure that the rate of nickel release from

Designation of the substance, of the groups of substances or of the preparation	Conditions of restriction
	those parts of such articles coming into direct and prolonged contact with the skin will not exceed 0,5 µg/cm <sup>2</sup> /week for a period of at least two years of normal use of the article.
Substances which appear in Annex I to Directive 67/548/EEC classified as carcinogen category 1 or carcinogen category 2 and labelled at least as 'Toxic (T)' with risk phrase R 45: 'May cause cancer' or risk phrase R49: 'May cause cancer by inhalation', and listed as follows: Carcinogen category 1 listed in Appendix 1. Carcinogen category 2 listed in Appendix 2.	Shall not be used in substances and preparations placed on the market for sale to the general public in individual concentration equal to or greater than: – either the relevant concentration specified in Annex I to Directive 67/548/EEC, or – the relevant concentration specified in Directive 1999/45/EC.
Substances which appear in Annex I to Directive 67/548/EEC classified as mutagen category 1 or mutagen category 2 and labelled with risk phrase R46: 'May cause heritable genetic damage', and listed as follows: Mutagen category 1 listed in Appendix 3. Mutagen category 2 listed in Appendix 4.	
Substances which appear in Annex I to Directive 67/548/EEC classified as toxic to reproduction category 1 or toxic to reproduction category 2 and labelled with risk phrase R60: 'May impair fertility' and/or R61: 'May cause harm to the unborn child', and listed as follows: Toxic to reproduction category 1 listed in Appendix 5. Toxic to reproduction category 2 listed in Appendix 6.	
(a) creosote; wash oil CAS No 8001-58-9 EINECS No 232-287-5 (b) creosote oil; wash oil CAS No 61789-28-4 EINECS No 263-047-8 (c) distillates (coal tar), naphthalene oils; naphthalene oil CAS No 84650-04-4	Shall not be used as substances or in preparations in the treatment of wood.

Designation of the substance, of the groups of substances or of the preparation	Conditions of restriction
<p>EINECS No 283-484-8 (d) creosote oil, acenaphthene fraction; wash oil CAS No 90640-84-9 EINECS No 292-605-3 (e) distillates (coal tar), upper; heavy anthracene oil CAS No 65996-91-0 EINECS No 266-026-1 (f) anthracene oil CAS No 90640-80-5 EINECS No 292-602-7 (g) tar acids, coal, crude; crude phenols CAS No 65996-85-2 EINECS No 266-019-3 (h) creosote, wood CAS No 8021-39-4 EINECS No 232-419-1 (i) low temperature tar oil, alkaline; extract residues (coal), low temperature coal tar alkaline CAS No 122384-78-5 EINECS No 310-191-5</p>	
<p>Chloroform CAS No 67-66-3 EINECS No 200-663-8</p>	
<p>Carbon tetrachloride-tetrachloromethane CAS No 56-23-5 EINECS No 200-262-8</p>	
<p>1,1,2 Trichloroethane CAS No 79-00-5 EINECS No 201-166-9</p>	<p>Shall not be used in concentrations equal to or greater than 0,1 % by weight in substances and preparations placed on the market for sale to the general public and/or in diffusive applications such as in surface cleaning and</p>

Designation of the substance, of the groups of substances or of the preparation	Conditions of restriction
1,1,2,2 Tetrachloroethane CAS No 79-34-5 EINECS No 201-197-8	cleaning of fabrics.
1,1,1,2 Tetrachloroethane CAS No 630-20-6	
Pentachloroethane CAS No 76-01-7 EINECS No 200-925-1	
1,1 Dichloroethylene CAS No 75-35-4 EINECS No 200-864-0	
1,1,1 Trichloroethane, methyl chloroform CAS No 71-55-6 EINECS No 200-756-3	
Substances meeting the criteria of flammability in Directive 67/548/EEC and classified as flammable, highly flammable or extremely flammable regardless of whether they appear in Annex I to that Directive or not.	Shall not be used on their own or in the form of preparations in aerosol generators that are placed on the market for the general public for entertainment and decorative purposes such as the following: metallic glitter intended mainly for decoration, artificial snow and frost, silly string aerosols, etc.
Hexachloroethane CAS No 67-72-1 EINECS No 200-6664	Shall not be used in the manufacturing or processing of non-ferrous metals.
Alkanes, C10-C13, chloro (short-chain chlorinated paraffins) (SCCPs) EINECS No 287-476-5	Shall not be placed on the market for use as substances or as constituents of other substances or preparations in concentrations higher than 1 %: in metal working, for fat liquoring of leather.
Azocolourants	Azodyes which, by reductive cleavage of one or more azo groups, may release one or more of the aromatic amines listed in Appendix 8, in detectable concentrations, i.e. above 30 ppm in the finished articles or in the dyed parts thereof, according to the testing methods listed in Appendix 10, shall not be used in textile and leather articles which may come into

Designation of the substance, of the groups of substances or of the preparation	Conditions of restriction
	<p>direct and prolonged contact with the human skin or oral cavity, such as clothing, bedding, towels, hairpieces, wigs, etc.</p> <p>Azodyes, which are contained in Appendix 9, 'List of azodyes', shall not be placed on the market or used for colouring textile and leather articles as a substance or constituent of preparations in concentrations higher than 0,1 % by mass.</p>
<p>Diphenylether, pentabromo derivative C<sub>12</sub>H<sub>5</sub>Br<sub>5</sub>O</p>	<p>Shall not be placed on the market or used as a substance or as a constituent of preparations in concentrations higher than 0,1 % by mass. Articles may not be placed on the market if they, or flame-retarded parts thereof, contain this substance in concentrations higher than 0,1 % by mass.</p>
<p>Diphenylether, octabromo derivative C<sub>12</sub>H<sub>15</sub>Br<sub>8</sub>O</p>	<p>Shall not be placed on the market or used as a substance or as a constituent of substances or of preparations in concentrations higher than 0,1 % by mass. Articles may not be placed on the market if they, or flame-retardant parts thereof, contain this substance in concentrations higher than 0,1 % by mass.</p>
<p>(a) Nonylphenol C<sub>6</sub>H<sub>4</sub>(OH)C<sub>9</sub>H<sub>19</sub> (b) Nonylphenol ethoxylate (C<sub>2</sub>H<sub>4</sub>O) nC<sub>15</sub>H<sub>24</sub>O</p>	<p>Shall not be placed on the market or used as a substance or constituent of preparations in concentrations equal or higher than 0,1 % by mass for the following purposes:</p> <ol style="list-style-type: none"> <li>(1) industrial and institutional cleaning;</li> <li>(2) domestic cleaning;</li> <li>(3) textiles and leather processing;</li> <li>(4) emulsifier in agricultural teat dips;</li> <li>(5) metal working except uses in controlled closed systems where the washing liquid is recycled or incinerated;</li> <li>(6) manufacturing of pulp and paper;</li> <li>(7) cosmetic products;</li> <li>(8) other personal care products except spermicides;</li> <li>(9) co-formulants in pesticides and biocides.</li> </ol>



Designation of the substance, of the groups of substances or of the preparation	Conditions of restriction
Cement	Cement and cement-containing preparations shall not be used or placed on the market, if they contain, when hydrated, more than 0,0002 % soluble chromium VI of the total dry weight of the cement.
Toluene CAS No 108-88-3	Shall not be placed on the market or used as a substance or constituent of preparations in a concentration equal to or higher than 0,1 % by mass in adhesives and spray paints intended for sale to the general public.
Trichlorobenzene CAS No 120-82-1	Shall not be placed on the market or used as a substance or constituent of preparations in a concentration equal to or higher than 0,1 % by mass for all uses except as an intermediate of synthesis, or as a process solvent in closed chemical applications for chlorination reactions, or in the manufacture of 1,3,5 – trinitro – 2,4,6-triaminobenzene (TATB).
Polycyclic-aromatic hydrocarbons (PAH) 1. Benzo(a)pyrene (BaP) CAS No 50-32-8 2. Benzo(e)pyrene (BeP) CAS No 192-97-2F 3. Benzo(a)anthracene (BaA) CAS No 56-55-3 4. Chrysen (CHR) CAS No 218-01-9 5. Benzo(b)fluoranthene (BbFA) CAS No 205-99-2 6. Benzo(j)fluoranthene (BjFA) CAS No 205-82-3 7. Benzo(k)fluoranthene (BkFA) CAS No 207-08-9 8. Dibenzo(a, h)anthracene (DBA <sub>h</sub> A) CAS No 53-70-3	Extender oils shall not be placed on the market and used for the production of tyres or parts of tyres, if they contain more than 1 mg/kg BaP, or more than 10 mg/kg of the sum of all listed PAHs.
The following phthalates (or other CAS- and EINECS numbers covering the	Shall not be used as substances, as constituents of preparations or articles,

Designation of the substance, of the groups of substances or of the preparation	Conditions of restriction
substance): bis (2-ethylhexyl) phthalate (DEHP) CAS No 117-81-7 EINECS No 204-211-0 dibutyl phthalate (DBP) CAS No 84-74-2 EINECS No 201-557-4 benzyl butyl phthalate (BBP) CAS No 85-68-7 EINECS No 201-622-7	at concentrations higher than 0,1 % by mass of the plasticised material, in toys and childcare articles.
The following phthalates (or other CAS- and EINECS numbers covering the substance): di-‘isononyl’ phthalate (DINP) CAS No 28553-12-0 and 68515-48-0 EINECS No 249-079-5 and 271-090-9 di-‘isodecyl’ phthalate (DIDP) CAS No 26761-40-0 and 68515-49-1 EINECS No 247-977-1 and 271-091-4 di-n-octyl phthalate (DNOP) CAS No 117-84-0 EINECS No 204-214-7	Shall not be used as substances or as constituents of preparations, at concentrations higher than 0,1 % by mass of the plasticised material, in toys and childcare articles which can be placed in the mouth by children. Toys and childcare articles containing these phthalates in a concentration higher than 0,1% by mass of the plasticised material shall not be placed on the market.

*Table C.2: Substances banned for carriage by road under the European Agreement concerning the international carriage of dangerous goods by road (ADR)*

UN Number <sup>43</sup>	Substance
0020 Class 1.2K	Ammunition, Toxic (with burster, expelling charge or propelling charge)
0021 Class 1.3K	Ammunition, Toxic (with burster, expelling charge or propelling charge)
1798 Class 8	Nitrohydrochloric Acid
2249 Class 6.1	Dichlorodimethyl Ether, Symmetrical Class
2421 Class 2	Nitrogen Trioxide
2455 Class 2	Methyl Nitrite
3097 Class 4.1	Flammable Solid, Oxidising, N.O.S. <sup>44</sup>
3100 Class 5.1	Oxidising Solid, Self Heating, N.O.S.
3121 Class 5.1	Oxidising Solid, Water Reactive, N.O.S.
3127 Class 4.2	Self Heating Solid, Oxidising, N.O.S.
3133 Class 4.3	Water Reactive Solid, Oxidising, N.O.S.
3137 Class 5.1	Oxidising Solid, Flammable, N.O.S.
3255 Class 4.2	tert-Butyl Hypochlorite

<sup>43</sup> The UN number is assigned to the dangerous substance under the ADR; the Class refers to the category of the substance as explained below:

Class 1 - Explosives

Class 2 - Flammable Gases (subdivided in Class 2.1, 2.2 & 2.3)

Class 3 - Flammable Liquids

Class 4 - Flammable Solids, self reactive substances and desensitized explosives (subdivided in Class 4.1, 4.2 & 4.3)

Class 5 - Oxidising Substances (subdivided in Class 5.1 & 5.2)

Class 6 - Toxic Substances (subdivided in Class 6.1 & 6.2)

Class 7 - Radioactive Substances

Class 8 - Corrosive Substances

Class 9 - Miscellaneous Dangerous Goods

<sup>44</sup> NOS: Not otherwise specified; it refers to chemicals that have the listed properties but have no name as such or probably cover a whole range of chemicals with the same properties

Table C.3: List of high consequence dangerous goods

Class	Division	Substance or article	Quantity		
			Tank (l) <sup>c</sup>	Bulk (kg) <sup>d</sup>	Packages (kg)
1	1.1	Explosives	a	a	0
	1.2	Explosives	a	a	0
	1.3	Compatibility group C explosives	a	a	0
	1.4	Explosives of UN Nos. 0104, 0237, 0255, 0267, 0289, 0361, 0365, 0366, 0440, 0441, 0455, 0456 and 0500	a	a	0
	1.5	Explosives	0	a	0
2		Flammable gases (classification codes including only the letter F)	3000	a	b
		Toxic gases (classification codes including letters T, TF, TC, TO, TFC or TOC) excluding aerosols	0	a	0
3		Flammable liquids of packaging groups I and II	3000	a	b
		Desensitized explosives	0	a	0
4.1		Desensitized explosives		a	0
4.2		Packing group I substances	3000	a	b
4.3		Packing group I substances	3000	a	b
5.1		Oxidizing liquids of packing group I	3000	a	b
		Perchlorates, ammonium nitrate, ammonium nitrate fertilizers and ammonium nitrate emulsions or suspensions or gels	3000	3000	b
6.1		Toxic substances of packing group 1	0		0
6.2		Infectious substances of Category A (UN Nos. 2814 and 2900)	a	0	0
7		Radioactive material	3000 A (special form) or 3000 A, as applicable, in Type B(U), B(M) or C packages		
8		Corrosive substances of packing group 1	3000	a	b

a Not relevant

b The provisions of 1.10.3, of Annex A (General provisions and provisions concerning dangerous substances and articles) of the ADR Regulations, do not apply, whatever the quantity is.

c A value indicated in this column is applicable only if carriage in tanks is authorized in accordance with Chapter 3.2, Table A, column (10) or (12) of ADR. For substances that are not authorized for carriage in tanks, the instruction in this column is not relevant.

d A value indicated in this column is applicable only if carriage in bulk is authorized, in accordance with Chapter 3.2, Table A, column (10) or (17), of ADR. For substances that are not authorized for carriage in bulk, the instruction in this column is not relevant

#### D. Laboratories

Table D.1: The test analysis that are currently being performed at Saybolt Malta Ltd.

Test	Method	Test	Method
Acetone in Methanol	ASTM D 1612	Iron content	ASTM D 5863/B
Acid number ( potentiometric )	ASTM D 664	Lead content	ASTM D 3605
Acid number ( colourimetric )	ASTM D 974	Lead content	ASTM D 3237
Acidity	ASTM D 1613	Lead content	ASTM D 5863/B
Aluminium	IP 377	Lubricity (HFFR)	ASTM D 6079
Aniline gravity product	ASTM D 611/4052	Magnesium	ASTM D 5863/B
Aniline point	ASTM D 611	Mercaptan sulphur	ASTM D 3227
Aniline point on OVHD	ASTM D 1160/611	Micro Carbon Residue	ASTM D 4530
Appearance	Visual	Micro Carbon Residue on 10% bottoms	ASTM D 4530
Aromatics	ASTM D 1319	Mini Reid Vapour Pressure rvp	ASTM D 5191
Aromatics	IP 391	MON + lead / MMT	ASTM D 2700
Ash	ASTM D 482	MTBE purity	GC
Asphaltenes	IP 143	Naphtalenes	ASTM D 1840
Bacterial count	SMP-010	Nickel content	ASTM D 5863/B
Benzene in Gasoline	EN 238	Nickel content	ASTM D 5863/A
Benzene in Gasoline	ASTM D 3606	Nitrogen	ASTM D 3228
Bromine number	ASTM D 1159	Non volatile matter	ASTM D 1353
Bromine Number on OVHD	ASTM D 1160/1159	Octane Number (Motor) MON	ASTM D 2700
Calcium	ASTM D 3605	Octane Number (Research) RON	ASTM D 2699
Calcium content	ASTM D 5863/B	Odour	
Calorific value (Gross)	ASTM D4868	Olefins	ASTM D 1319
Calorific value ( Net )	ASTM D4868	Oxidation Stability	ASTM D 2274
Calorific Value	ASTM D 240	Oxidation Stability	ASTM D 525
Carbon Res. Conradson 10% bottom	ASTM D 189	Oxygenates - 6 in total (MTBE5599)	SMP-044
Carbon Residue Conradson	ASTM D 189	Oxygenates - from 1 to 2 in total	SMP-044
Carbon Residue Ramsbottom	Calc.	Particulate content of Gas Oil	DIN 51419 / ASTM D 5452
CCAI	SMP-022	Permanganate time test	ASTM D 1363

Cetane index	ASTM D 4737/ ASTM D976	PH	ASTM E 70
CFPP	IP 309	Potassium	ASTM D 3605
Char value	IP 10 / ASTM D 187	Potassium	ASTM D 5863/B
Chlorides in water(Salinity)	SMP-017	Pour point (upper)	ASTM D 97
Chlorides in water soluble chemicals	SMP-011	Pour point, Lower	ASTM D 97
Cloud Point	ASTM D 2500	P-Value flocculation	SMS 1600-83
Colour	ASTM D 1500	RON + lead / MMT	ASTM D 2699
Colour (Visual)	Visual inspection	Salt in crude oil	ASTM D 3230
Colour Pt-Co (APHA)	ASTM D 1209	Sediment by extraction	ASTM D 473
Colour Rating	ASTM D 2276	Silicon content	IP 377
Colour Saybolt	ASTM D 156	Silver corrosion	IP 227 / ASTM D4814
Compatibility	ASTM D 4740	Smoke point	ASTM D 1322
Conductivity	ASTM D 2624	Sodium content	ASTM D 3605
Copper content	ASTM D 5863/B	Sodium content	ASTM D 5863/B
Copper corrosion	ASTM D 130	Specific Energy Net	ASTM D 4529
Density at 15 °C	ASTM D 1298	Specific Energy Net - if part of full analysis	ASTM D 3338
Density at 15 °C	ASTM D 4052	Specific Energy Net - if requested separately	ASTM D 3338
Demulsification	ASTM D 1401	Specific Gravity	ASTM D 4052
Diesel Index	ASTM D 4052 / 611	Stability	ASTM D 4740
Distillation	ASTM D 86	Strong Acid Number	ASTM D 664
Distillation, Vacuum	ASTM D 1160	Strong Acid Number	ASTM D 974
Doctor Test	IP 30 / ASTM D 4952	Sulphur	ASTM D 2622
FAME	ISO 140748	Thermal stability(JFTOT)	ASTM D 3241
Filtration time test	MIL-DTL-83133E	Toluene Equivalent	Exxon 79-004
Flash point	ASTM D 93	Total Base No.	ASTM D 2896
Flash point (open cup)	ASTM D 92	Total Sediment	IP 375
Flash Point Setaflash	ASTM D 3898	Undissolved water and solid	Visual
Freezing Point	ASTM D 2386	Vanadium	ASTM D 5863/B
FSII	ASTM D 5006	Vanadium	ASTM D 5863/A
Gravity API at 60 °F	Calculated	Vanadium	ASTM D 3605

Gums existent	ASTM D 381	Vapor Liquid Ratio	ASTM D 4814
Gums existent (Steam Jet)	ASTM D 381	Vapour Lock Index(RVP + Dist)	Calc.
Gums Potential	ASTM D 873	Viscosity at ( 20 to 100 ) °C	ASTM D 445
Hot Filtration Accelerated	IP 375/390	Viscosity at ( -20 to 20 ) °C	ASTM D 445
Hot Filtration Existent	IP 375	Viscosity index	ASTM D 2270
Hot Filtration Potential	IP 375/390	Water and sediments	ASTM D 1796
Hydrocarbons in water	ASTM D 3921	Water and sediments(BS & W)	ASTM D 2709
Hydrocarbons in water	SMP-043	Water by distillation	ASTM D 95
Hydrocarbons Test for Methanol	SMP-009	Water Karl Fisher	ASTM E 1064
Hydrogen content	ASTM D 3343	Water reaction interface rating	ASTM D 1094
Hydrogen / Carbon content	ASTM D 5291	WSIM(water seperation)	ASTM D 3948
Hydrogen sulphide H2S	DRAEGER	Xylene equivalent	BP 230

### ANNEX 3

#### Available National Reports and Papers Addressing Various Aspects of Chemicals Management

- Malta Standards Authority: Information on the existing legislation on chemicals, cosmetics and pesticides can be found on the Regulatory Affairs Directorate page within the MSA website:-  
Chemicals: <http://www.msa.org.mt/rad/chemicals/>  
Cosmetics: <http://www.msa.org.mt/rad/cosmetics/index.htm>  
Pesticides: <http://www.msa.org.mt/rad/pesticides/index.htm>
- Malta in Figures 2009, published by NSO, can be retrieved from the web site:  
[http://www.nso.gov.mt/statdoc/document\\_file.aspx?id=2569](http://www.nso.gov.mt/statdoc/document_file.aspx?id=2569)
- The draft NATIONAL ENVIRONMENTAL HEALTH ACTION PLAN - MALTA (2006-2010) can be retrieved from the following web site:  
<http://www.sahha.gov.mt/showdoc.aspx?id=42&filesource=4&file=NEHAPDG.pdf>



ANNEX 4  
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