MALTA RESOURCES AUTHORITY

Annual Report 2009

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The Authority

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Dr Joseph Cilia, *B.Elec.Eng., M.Sc. (Nott.), Ph.D. (Nott.), MIEE*	**Deputy Chairman**
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When the term of office of the Board expired on the 30 September, 2009, a new Board of the Authority was nominated for the term between 1 October, 2009, and 30 September, 2010.

Dr Reuben Balzan, *LL.D.*	**Chairman**
Ing. Francis Bugeja, *B.Eng. (Hons)*	**Deputy Chairman**
Mr Godwin E. Bencini	**Members**
Dr Pauline Galea, *B.Sc., M.Sc., Ph.D. (Wellington)*	
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Dr John Bonello, *BA, LL.M. (IMLI), LL.D.*	**Secretary to the Authority**

Ing. Anthony Rizzo, *B.Mech.Eng. (Hons)*	**Chief Executive Officer**
Dr Godwin Debono, *B.Sc., M.Sc., D.I.C., Ph.D. (Lond.)*	**Director for Mineral Resources Regulation**
Dr John Mangion, *D.Geol. (Milan), FGS*	**Director for Water Resources Regulation**
Ing. Godwin Sant, *B.Elec.Eng., M.Sc. Regulation*	**Director for Energy Resources Regulation**

Mission Statement

The Malta Resources Authority seeks to serve the Maltese community through effective, coherent, holistic and transparent regulation of the energy, minerals and water resources sectors of the economy, ensuring their advancement and sustainable use to support the integrated environmental, social, economic and business development of the Maltese Islands. It further seeks to contribute to and participate in ongoing regional development and assist in the nation's efforts to fulfil its international obligations in these spheres.

Chairman's Statement

As Chairman of the Malta Resources Authority and on behalf of my fellow members of the Board, it is my pleasure to report on the work carried out by the Authority during the year 2009.

During the year in review the Authority advised Government on the liberalisation of the inland retail fuel market. This led to the issue of two operating licences for the importation of LPG and Primary Storage, the issue of four licences for the distribution of bulk LPG and a licence for the distribution of LPG cylinders from a fixed point of sale.

An updated Draft Energy Policy was launched for public consultation in April, 2009. The document deals with the policy on the provision of both conventional and renewable electricity in Malta, and includes projects necessary to meet this objective in the most effective and feasible way, both economically and environmentally, with an enhancement of security of supply.

Then Authority was also heavily involved in the preparation of Malta's report, as required by the Water Framework Directive setting targets and deadlines for the achievement of water resource sustainability.

The Authority continued to support Government in its relations with the EU in matters related to energy and water, and played a leading role in the development of a national renewable energy action plan, which was eventually presented for approval to the European Commission.

Finally, I would like to thank the Authority Members, Chief Executive Officer and all Authority employees for their support and efforts throughout this year.

Chief Executive Officer's Introduction

The key issue tackled by the Malta Resources Authority during 2009 were the water and electricity tariffs. Setting the price mechanism for the first time was an important milestone.

The main challenges the Authority faces and is working on are the liberalisation of the fuel markets, the setting up of an LPG market, the privatisation of Enemalta's Gas Division and the control of ground water extraction. It is no secret that further action needs to be taken to reduce extraction.

During the year the Authority designed and launched a European Union-funded domestic aid scheme for the uptake of photovoltaic panels, solar water heaters, roof insulation, double glazing and micro wind generators. The scope of such grant schemes is to educate the public about the new technologies in the market and to encourage investment in the sector.

The Authority continued to participate in EU-funded projects. Two key projects were CLIMATEWATER and PV-NMS-NET. The CLIMATEWATER project aims to study European and international adaptation measures and strategies related to climate change impacts and how these are taken into account in water policies.

PV-NMS-NET aims to provide information on photovoltaic markets, support mechanisms and schemes in the 12 new member states, comprising of Poland, Bulgaria, Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Romania, Slovakia and Slovenia.

The Authority took an active part in MEDREG, the Association of Mediterranean Regulators for Energy (Electricity and Gas), an EU-funded project set up in 2006 as a Working Group and in 2007 as an association. MEDREG promotes the achievement of a consistent, harmonised and investment-friendly regulatory framework by providing maximum benefits to energy consumers of the Mediterranean region.

MEDREG's role is crucial to guarantee permanent collaboration between the regulatory authorities of the EU, the energy community member states and those of the Mediterranean countries.

This is the first time I am writing the Introduction to an annual report since I took over the job of Chief Executive Officer from Antoine Riolo in October, 2010. The role of the CEO is pivotal and my experience heading the Water Services Corporation and Enemalta will serve me in good stead in the regulation of these two major utilities, along with the extensive responsibilities of this Authority.

A word of thanks goes to Antoine, who set up the Authority in 2002 and has been CEO since then. All of us at the Malta Resources Authority wish him a healthy retirement.

In conclusion, I am looking forward to further strengthening the Authority's structures to ensure that it continues its valuable work and strengths its functions to protect all consumers, especially those most vulnerable.

My thanks go to the Authority's Board of Directors for their continuous support and understanding, and to the employees of the Authority for their commitment throughout the year.

Chapter 1

Corporate Issues

The Malta Resources Authority is the regulator of energy, minerals and water resources in the Maltese Islands. The Authority was established by the Malta Resources Authority Act XXV of 2000.

This annual report covers the period 1 January, 2009, to 31 December, 2009, and outlines the major activities implemented during that period.

Corporate Matters

Amendment to Article 31 of the Malta Resources Authority Act

By means of this amendment a maximum amount was established for the issuing of administrative fines. The amendment, substituting sub article (2) of Article 31 with a new sub article, was included to implement Budget measures for the financial year 2009 and other administrative measures (Act II of 2009).

Amendment of the Malta Resources Authority Act to ensure compliance with Directive 36/2005/EC on services in the internal market

Amendments to the Malta Resources Authority Act were drafted and implemented to ensure compliance with Directive 36/2005/EC on services in the internal market. A new Article 39 was introduced to regulate service providers' activities.

By means of this article, the Authority when regulating access to service activities falling under the Act shall:

(i) make it possible to complete all procedures and formalities relating to service activities electronically through a point of single contact (PSC);

(ii) provide information and assistance to service providers and recipients making use of their services;

(iii) not duplicate requirements which are already contained in a service provider's authorisation when that provider is already established in another member state, and seeks to exercise a service activity in Malta. This, however, this does not prohibit the Authority from adding new conditions or requirements which are not already covered elsewhere;

(iv) apply a selection procedure to potential candidates, where the number of authorisations is limited, to ensure impartiality, transparency, fair competition and non-discrimination. In establishing this procedure the Authority shall take into consideration any overriding reason that relates to the public interest. An authorisation shall be for an indefinite period except where the authorisation is automatically renewed or is subject to the continued fulfilment of requirements.

Amendment to the Swimming Pools (Control) Act

The Swimming Pools (Control) Act was amended to refer to the Minister of Resources as the competent Minister, in view of the regulatory role carried out by the Malta Resources Authority. The amendment was included as part of the Act to implement Budget measures for the financial year 2009 and other administrative measures (Act II of 2009).

Resources Appeals Board (Procedure) Regulations, 2009 (LN 70/2009)

The regulations provide for the establishment of procedures to be followed before the Resources Appeals Board, established by Article 33 of the Malta Resources Authority Act. The regulations are necessary for the availability of procedures specific to the Resources Appeals Board as provided for by Article 28 (2) (v) of the Malta Resources Authority Act. In terms of the legal notice, the Appeals Board is vested with all such powers as are vested by Cap. 12 of the Code of Organisation and Civil Procedure in the Civil Court, First Hall, and it shall, *mutatis mutandis*, be regulated by the appropriate rules set out therein.

Chapter 2

Participation in EU Affairs and EU Reporting

EU Directive 2003/30 on the use of biofuels or other renewable fuels for transport

The Authority, as part of its annual requirement, forwards a report to the EU on the use of biofuels in Malta. Apart from including data on the consumption of biofuels, the report also includes information on incentives that are in place to promote biofuels.

Fuel Quality Directive Land Based and Marine Based

All functions in relation to fuel quality in the inland market were passed over from MEPA to the MRA through the publication of Legal Notice 44 of 2008, *Quality of Fuel Regulations, 2008,* which covers all the relevant EU directives concerning fuel quality. In parallel with this, the Authority also reviewed and proposed amendments to a new fuel quality Directive, which is set to introduce higher percentages for biofuels in fossil fuels.

Report on the functioning of the electricity internal market – EU Directive 2003/54

As an obligation to the EU Commission, an annual report on the internal market of electricity supply was prepared by the Authority.

Report on the implementation of Directive 2001/77/EC

The Authority prepared a report on the progress of the implementation of Directive 2001/77/EC on the promotion of electricity produced from renewable energy sources in the internal electricity market.

EU Directive 2006/67 on the Report of minimum stocks of crude oil and/or petroleum products

As an obligation to the EU Commission, the Authority submits monthly reports on the security stocks held in compliance with the EU Directive 2006/67 and regularly attends the Oil Supply Group meetings.

Implementation of Directive 36/2005/EC – services in the internal market

The Directive was adopted in December 2006 with an implementation date of 27 December, 2009.

The objectives of the Directive are to complete the internal market, address discriminatory practices and barriers to effective cross-border service provision, and create a genuine market in services, boosting growth, jobs and competitiveness. The Directive contains an aggregate of measures with the specific focus on the development of co-operation among the member states in the area of administration.

Completion of screening process

A screening process was carried out to identify the operations and service activities regulated by Authority within the scope of the Directive.

The following 12 activities, which fall under the Authority's remit, were identified as being within the scope of applicability of the Directive:

1. Distribution and supply of electricity;
2. Importation and wholesaling of petroleum products;
3. Retail sale of automotive fuels – petrol stations, jobbers and kerosene hawkers;
4. Retail distribution of LPG in cylinders, including retail of LPG from a fixed point of sale;
5. Distribution of LPG in bulk;
6. Operation of a fixed piped network of LPG;
7. Operation of an autogas retail station;
8. Primary storage of petroleum products;
9. Bunkering (importation, wholesaling and sale of fuels offshore);
10. Collection, distribution and purification of water discharge and treatment of waste water;
11. Water tanker operators; and
12. Installation of electrical wirings and fittings – Wiremen Licences (A & B).

Chapter 3

Energy Resources Regulation

Liberalisation of the Inland Fuel Market

Liberalisation of importation and storage of petroleum products

Since the liberalisation of the inland fuel wholesale market, the fuel sector has been open to competition. A number of operators, including Enemalta Corporation, have been authorised to conduct business as an importer and/or wholesaler of petroleum.

Amendments to the Petroleum for the Inland (Wholesale) Fuel Market Regulations

The regulations introduce amendments that bring local legislation in line with the Services Directive authorising schemes regulating the importation and wholesaling of petroleum products and the primary storage of petroleum products.

Amendments not directly related to the Directive were also part of the legal notice. These relate to the establishment of fees for the authorisation of LPG bottling; and the exemption from the requirement to obtain an authorisation to import certain petroleum products including their exemption from the requirement of a regulation charge being imposed on them as listed in the Fourth and Fifth schedules of the regulations.

Petroleum for the Inland (Retail) Fuel Market Regulations

These regulations are intended to regulate operations and activities carried out in the inland retail fuel market, and to create a licensing framework.

The following operations and activities are proposed to be regulated:

(a) operation of a secondary storage facility;

(b) activity of a fuel distributor;

(c) operation of a petroleum filling station.

These were governed by outdated rules and licences, which did not fully address present day safety and security standards.

The activity of a fuel distributor and the operation of a petroleum filling station are service activities that fall within the scope of the Services Directive and the proposed regulations reflect their requirements.

Set-up of the Energy Statistics Reporting System

In line with Directive 1099 of 2008, the Authority has set up an energy statistics reporting system. Licensed operators are required to submit accurate and timely data on energy transactions conducted during the reporting month. This information is used for monitoring and internal policy-making purposes and is submitted, in aggregated form, to the National Statistics Office.

Twinning Project: Strengthening the Capacity of the Malta Resources Authority in the Implementation of the Petroleum Market Liberalisation

The Authority applied for EU assistance, through transition facility funds of 2006, to carry out a twinning project on the Implementation of the Liberalisation of the Petroleum Market. The EU accepted the proposed twinning and this was carried out with the German Federal Ministry of Economics and Technology

The overall objective of the twinning light project was to strengthen the capacity of the Malta Resources Authority to regulate and monitor effectively a liberalised petroleum market, in line with the requirements of the freedom of movement of goods and services. The specific purposes of the project were two-fold: to provide the Authority with the technical background required to fully ensure that its remit in the newly liberalised scenario is fulfilled; and to equip the Authority with the necessary regulatory and legal skills for it to fulfil its function to regulate and monitor the petroleum market. The achievements of this twinning project met all mandatory conditions specified in the twinning contract.

Fuel Quality Monitoring Programme

Publication of the Quality of Fuels Regulations Implementation of the fuel quality monitoring programme

Legal Notice 44 of 2008 on the Quality of Fuel Regulations 2008, transposing Directive 2005/33/EC, designated the Malta Resources Authority as the competent authority on issues related to fuel quality. In terms of these regulations it is the Authority's remit to regulate the quality of fuels used in the Maltese territory and on ships, especially the content of pollution causing chemicals, such as sulphur and benzene.

The Authority is required to establish a monitoring programme on the quality of fuels being released in the Maltese fuel market. In 2009, the Authority carried out inspections on 12 petrol stations and lifted 50 samples for diesel, unleaded petrol and lead replacement petroleum. A full test was undertaken on each of these samples. Additionally, the Authority's inspectors lifted 165 diesel samples from 98 petrol stations to test for sulphur content exceeding specifications listed in LN 44 of 2008.

Regulation charge on fuels released for inland consumption

In line with LN 278 of 2007 on the Regulation of the Inland (Wholesale) Fuel Market, a system was set up for the regular provision of information on fuels released for inland consumption and for the monthly invoicing and collection of the regulation charge from licensed importers and/or wholesalers.

This independent source of information will enable the Authority to carry out a detailed fuel quality monitoring programme, required to fulfil the obligations according to Directive 2005/33/EC on the quality of fuel placed on the inland market.

Liquefied Petroleum Gas

The Liberalisation of the Market

Following the privatisation of the retail and distribution aspect of the Enemalta Gas Division, the Authority issued two operating licences for the importation of LPG and Primary Storage. In addition, in 2009 the Authority also issued four licences for the distribution of bulk LPG and a licence for the distribution of LPG cylinders from a fixed point of sale.

Autogas

In the first quarter of 2009 a working group was set up to co-ordinate the introduction of autogas in the market. Following discussions with all interested parties, including car importers, companies involved in retrofitting, and the competent authorities, namely Transport Malta and the Civil Protection Department, the working group drafted the legislation that was sent for notification to the European Commission in the first quarter of 2010.

LPG Codes of Practice

In the United Kingdom, gas operators design, construct and operate in the LPG market in conformity with Codes of Practice issued by the Liquefied Petroleum Gas Association (UKLPG). The Codes of Practice cover most sectors of the LPG market, including location of storage vessels, regulation of autogas, storage and filling of cylinders and technical details on LPG accessories, such as safety valves and piping.

Most of the UK Codes of Practice were transposed to the Maltese LPG scenario with the authorisation of the UKLPG. A number of Authorities collaborated closely in this exercise, including the Occupational Health and Safety Authority, the Civil Protection Department, the Malta Standards Authority and the Malta Environment and Planning Authority, due to the overlapping and intersecting of competences that such a codification entails.

In June 2009 a public consultation exercise was held on the Codes of Practice. Following the positive reaction from people involved in the LPG industry, the Codes of Practice were finalised. The EU accepted the notification *prima facie* and no further comments or correspondence was exchanged,

Improvement of security at LPG installations

During 2009 the Authority received 20 requests for the installation of LPG storage for own use in industry, commercial and residential premises: 18 commercial and two domestic. All were accepted. The installations were erected in accordance with the Malta Resources Authority LPG Codes of Practice since the relevant legislation had been in force since October 2009.

Courses to establish competent persons in LPG

The Authority, together with MCAST, made the necessary preparations to establish a course to certify competent persons able to carry out assessments, supervise material alterations and certify authorised facilities so that the safety of LPG installations be increased.

The course, planned to be held in 2010, will be delivered in partnership with MCAST, with the European Registration Scheme for Personnel Competence (ERS) of the UK as the accrediting institution and MNLPG Consultancy, also from the UK, as tutors. Successful candidates will be issued with certificates from the European Registration Scheme for Personnel Competence.

LPG Price and Revision of LPG Price-Setting Mechanism

Initial work was undertaken on the framework of a mechanism to monitor the price setting of LPG and propane sold in cylinders and in bulk. The priority was to realign the price charged to consumers with the costs incurred by Enemalta Corporation for the importation, storage, bottling, distribution and retail of LPG and propane cylinders.

Two Authority employees attended a study visit to the Ministry of Commerce, Industry and Tourism in Cyprus to model the LPG price mechanism on that used in that country.

Amendments to the Liquefied Petroleum Gas Market Regulations

The regulations introduced amendments which brought into line the authorisation schemes regulating the operation of a fixed piped network of LPG, the operation of autogas retail stations, the retail distribution of LPG in cylinders including retail of LPG from a fixed point of sale and the distribution of LPG in bulk with the Services Directive.

Bunkering

Bunkering (Authorisation) Regulations

The scope of the legal notice is to regulate operations and activities carried out in the bunkering market (the importation, wholesale and retail sale of fuels offshore) and to establish a licensing framework in line with the requirements of Directive 2006/123/EC on services in the internal market.

The proposed legislation provides for a legal and regulatory framework for the following operations and activities:

(a) operation of a marine fuel retail station through dispensers operated in the proximate vicinity of the shoreline and operating exclusively for ships;

(b) loading, discharging and transferring of fuels between a bunker barge, a marine terminal, a marine facility or any two or more of the preceding, to a receiving ship where those fuels are for fuelling the same ship or its machinery; and

(c) the loading, discharging and transferring of fuels between a road tanker and a receiving ship.

Impact Assessment on the Regulation charge on fuels released for marine bunkering purposes

In conjunction with the setting up of a reporting system for the collection of the regulation charge on fuels released in the inland market, the Authority started an exercise to estimate the impact on the revenue of bunker operators with the introduction of a regulation charge on fuels released for marine bunkering purposes. This exercise is expected to be completed by early 2010.

Oil Stocks

Intergovernmental Agreement on reciprocal holding of stocks of crude oil and petroleum products between Malta and the Netherlands and between Malta and Italy

As part of their EU obligation to hold security stocks of petroleum products for use in cases of emergencies equivalent to 90 days' consumption, member states may opt to hold part of their stock obligations in other EU countries. In terms of Directive 2006/67/EC, intergovernmental agreements are required to be in place guaranteeing these arrangements.

The Government, through the Malta Resources Authority and the Ministry of Foreign Affairs, started negotiations with Sweden and Italy. The agreements include reciprocity claims in which each country may hold stocks in the other country.

Regulation of the Electricity Sector

Electricity supply regulations amendments

After a request by Enemalta Corporation, amendments to the electricity supply regulations were proposed mainly aimed at facilitating the nationwide rolling out of the smart metering project. The prime purpose of the amendments was to enable Enemalta and/or its agents to install the smart meters in private premises with the introduction of regulations on scheduling of appointments, fees for appointments outside the schedule and issues related to the location of the meter.

Electrical Installations Regulations

The legal notice regulates the provision of services related to electrical installation works and to establish an authorisation scheme for service providers carrying out this activity. The regulations replace the parts of the Electricity Supply Regulations on the granting of the Wireman Licences A and B, and the regulation of their activity.

Two classes of authorisations for electrical installation works are envisaged by the regulations:

(a) authorisation A for the installation, alteration, extension and certification of single phase electrical installations; and

(b) authorisation B for the installation, alteration, extension and certification of single phase electrical installations and three-phase electrical installations rated up to 300 Amps per phase. The holder of an authorisation B may also carry out installation, alteration, extension and certification work on three-phase electrical installations rated more than 300 Amps per phase but may not certify these electrical installations.

Licensing of Wiremen

The Authority continued its obligations as the accrediting body to issue licences to wiremen to operate as Licence A in single phase electrical installations and Licence B in three-phase electrical installations. During 2009, the Electricity Board carried out 17 sessions in which it interviewed 104 candidates for Licence A and 46 candidates for Licence B. The board recommended granting 93 candidates Licence A and 40 Licence B.

This activity is being carried out to ensure that the electrical installations workforce is well prepared to deliver good workmanship, and ensure safety requirements are adhered to during their tasks and for the users of their installations.

During 2009 discussions were held on the implications of the transposition of the Services Directive on wireman activities.

Other Issues

Energy Policy

An updated Draft Energy Policy was launched for public consultation in April, 2009. The document deals with the policy on the provision of both conventional and renewable electricity in Malta, and includes projects necessary to meet this objective in the most effective and feasible way, both economically and environmentally, with an enhancement of security of supply.

The policy includes measures to improve security of supply through energy efficiency, diversification of energy sources, an electrical interconnection with Sicily to complement local generation expansion and plans to increase the use of alternative renewable energy resources. The reduction of emissions from the energy sector in terms of CO_2 and other pollutants is also integrated in the policy.

The policy lists a number of forthcoming projects aimed both at reducing greenhouse gas emissions and to enable Malta to modernise its energy sector in the process of meeting its international commitments, while enhancing its security of supply.

The Energy Policy focuses on six key priority areas of action to meet the objectives of a secure, competitive and environmentally sound energy sector. The aims of these priority areas are:

- energy efficiency;
- reducing reliance on imported fuels;
- stability in energy supply;
- reducing emissions from the energy sector;
- efficient and effective delivery of energy; and
- support to the energy sector to create synergies with other sectoral policies and strategies.

The Energy Policy intends to be coherent with other national policies/strategies and obligations, such as the Waste Management Strategy, the Climate Change Strategy, and environmental policies and obligations.

In accordance with Strategic Environmental Assessment Regulations, in 2009, the Malta Resources Authority, on behalf of the Government, submitted a plan description statement on the draft Energy Policy to the SEA Competent Authority. The SEA Competent Authority notified the MRA of the requirement to carry out an SEA on the Energy Policy.

An SEA on the draft Energy policy was initiated in November 2009. The SEA will evaluate the environmental impacts of the Energy Policy in order to determine is its adoption will have significant effects on the environment. The aim is to help to improve on the

Energy Policy especially with respect to the promotion of sustainable development. The SEA process will also increase public involvement in the formulation of the policy document through the various stages of consultation which are required by the SEA regulations. The process will lead to the finalisation of the Energy Policy.

Participation in MEDREG

MEDREG, the Association of Mediterranean Energy (Electricity and Gas) Regulators, is an EU-funded project set up in 2006 as a Working Group and in 2007 as an association. It aims to promote the achievement of a consistent, harmonised and investment-friendly regulatory framework by providing maximum benefits to energy consumers of the Mediterranean region. MEDREG's role is crucial to guarantee the existence of permanent collaboration between the Regulatory Authorities of the EU, the energy community member states and those of the Mediterranean countries.

MEDREG, in particular, focuses on the promotion and exchange of know-how, expertise exchange, specialised training and studies in the field of energy regulation, notably in collaboration with the Florence School of Regulation (FSR) and with the support of the European Commission. The MRA participated in periodic MEDREG meetings held during 2009.

The development of the required robust electricity infrastructure between the European market and the Mediterranean will also necessitate the harmonisation of security criteria and network codes. The building of an effective green energy market requires a transparent, level playing field for green energy trade that has to be fostered through the appropriate legislative and regulatory framework. Co-operation between EU member states and non-EU member states in the Mediterranean region has to aim at the development of a common regional policy for these areas with clear targets for renewable energy and a final support mechanism where appropriate.

MEPA Consultation

The Energy Directorate received several development consultation requests from MEPA during 2009. These varied from large projects, like the New Oncology Hospital, to small developments like the Karting Club at Ħal Far. Other large projects included the three wind turbine farms at Baħrija, Ħal Far and Sikka l-Bajda, where the applicant was the Ministry for Resources and Rural Affairs. There were also two private applications for similar projects on the Marfa Ridge and Xrobb l-Għaġin. Projects making use of solar energy were also assessed since there were applications for PVs in il-Kortin in Xagħra, at Magħtab and at the Ċirkewwa ferry terminal.

An LPG Primary storage facility at Luqa and new Bulk LPG installations were also considered, together with two relocations of petrol stations and the construction of car wash facilities.

CHAPTER 4

Energy efficiency and renewable energy

The Authority's function is to implement legislation, policy and schemes in line with the national energy efficiency action plan. In the past year these included:

- Administration of nationally funded grant schemes on roof insulation, double glazing, photovoltaic panels, micro wind turbines and solar water heaters; and
- Design and launch of an EU-funded domestic aid scheme for the uptake of renewable energy sources.

Renewables scheme proposals

The capital investment related to Renewable Energy Sources (RES) technologies is in most cases still relatively high and it is expected that financial assistance will still be required in the foreseeable future to promote an increase in their uptake. The use of RES can contribute to reducing Malta's total dependency on imported fuels and the associated vulnerability to price hikes on the international market.

The Authority continued implementing support schemes to promote the uptake of solar installations (solar thermal water heaters and PV panels) in private households. Government further promoted micro-generation renewable energy technologies in the commercial and industrial sectors through a European Regional Development Fund (ERDF) 2007-2013 scheme that provided financial assistance to operators in the two sectors who wished to implement renewable energy and energy efficiency projects.

The consumption of energy originating from renewable sources can contribute to the reduction of Malta's reliance on imported fuels and security of supply. More importantly, renewable energy is regarded as a sound policy option to promote environment-friendly energy production; and it also contributes to a reduction of greenhouse gas emissions deemed to be the main instigators of climate change. In many applications, renewable energy also contributes towards the reduction of air pollution.

In 2009, the previous capital grant scheme for the residential sector was replaced by the renewable energy and energy efficiency subsidy schemes.

Renewable Energy and Energy Efficiency Subsidy Schemes

In previous years the Government schemes improved awareness of the alternative energies available. However, their uptake was very low. Following a review of the schemes and its combination with the promotion of other actions to reduce the heating and cooling load, Government decided to increase the subsidy for all the grant schemes with the exception of microwind. For the first time a grant on double glazing was offered in 2009.

Technical standards for SWH, PV modules, double glazing and roof insulation were introduced to ensure that the equipment or technology was up to the highest European standards and technology. Only equipment complying with the established standards, registered with the Authority, was eligible for the scheme. Retailers were required to submit an application together with certificates of a third party. Certificates were checked on-line to verify validity.

To provide applicants with a better service, the application process was divided into three parts. An applicant first had to apply to check whether he and the system were eligible for the grant. Once this was confirmed by the Authority, a grant offer was sent to the applicant informing him he could purchase and install the system. When the system was paid and installed, Part III of the application

form had to be submitted, together with the documents requested, including the original fiscal receipt. When these were checked and verified, a cheque representing the relevant grant amount was sent to the applicant. Authority inspectors were sent randomly on site to verify that the technology had been installed and that the model number matched the model number documented on applications.

The Authority is at present in contact with the Institute of Energy Technology and MCAST to set up a certified course for installers so that the solar and power potential of the PVs and solar water heaters is maximised.

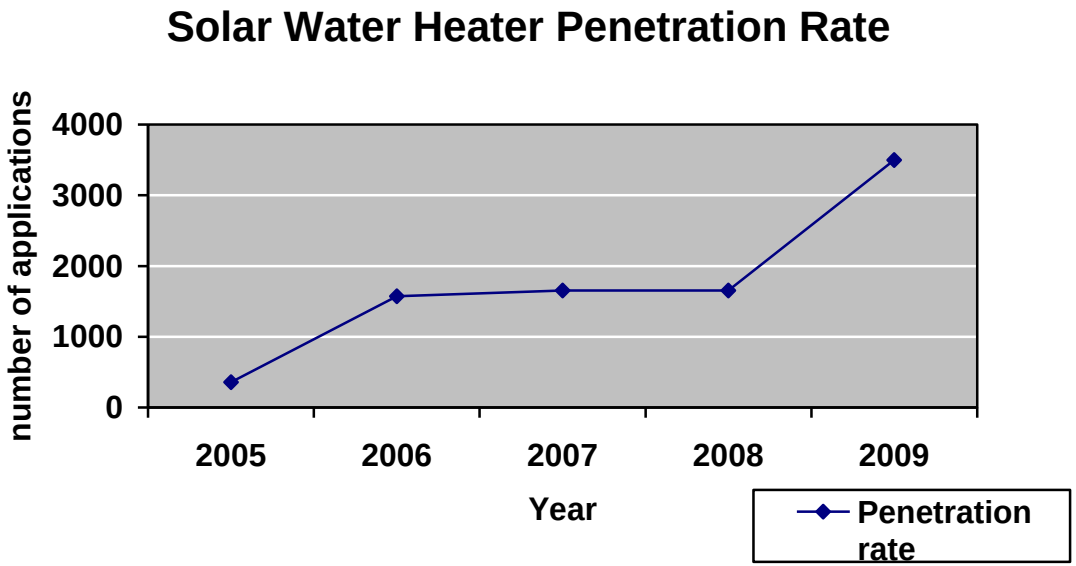
Solar Water Heaters

The solar water heater grant increased from 25% to 66.6% up to a maximum of €460. In addition to the subsidy, there was an Enemalta (the distribution system operator in Malta) exemption fee of €163.06 for electricity connection when solar water heaters were installed in new buildings that were not previously supplied with electricity. This also helped to increase the penetration rate.

To improve the quality of the solar water heaters, the Institute of Energy Technology offered free technical inspections on voluntary application by the home owner. A technical inspection was made on the solar heating system installed. Observations made include measuring the azimuth and the inclination of the panels, checking the water storage tank size and solar panel area to see if sufficient collector area is available to heat the water effectively and checking on lagging, insulation and back-up heating settings.

A survey to understand the lifestyle of the users and advise on certain measures that could save on hot water usage was carried out. Following the visit, an official report was sent to the owner highlighting the good results as well as those measures that needed to be taken to improve the performance of the solar system, with the scope of saving more energy and getting better customer satisfaction.

The increased investment aid, coupled with these measures, resulted in a penetration rate of 3,500 in 2009. This was double that obtained in the previous two years.



The estimated additional energy savings in 2009 was 3,500 MWh. Estimates of savings are based on daily savings of 5 kWh per day for 210 days per year.

Microwind

The grants on microwind turbines remained at the same rates previously administered. Eligible applicants were offered a grant of 25% on the purchase of the wind energy system subject to a maximum of €232.94.

The penetration rate of this scheme was negligible and the reason for this is mainly attributed to MEPA restrictions on sound levels. MEPA permits for wind turbines have now been modified to allow wind turbines to be installed in urban areas for feasibility studies. This will serve as a catalyst for a policy decision.

Photovoltaic systems

The grant for photovoltaic systems increased from 20% to 50% up to a maximum of €3,000. Energy generation from micro-RES was paid for by Enemalta Corporation using a net metering scheme. Enemalta also provided the necessary metering free of charge. During 2009 there was an increase in electricity tariffs and a decrease in the prices for photovoltaics. These factors improved the demand for photovoltaics and resulted in a sharp rise in the penetration rate. The scheme was a success, with a total of 212 applications over 2 weeks. Energy savings from photovoltaic installations in 2009 increased to an estimate of 318 MWh.

Electric Vehicles

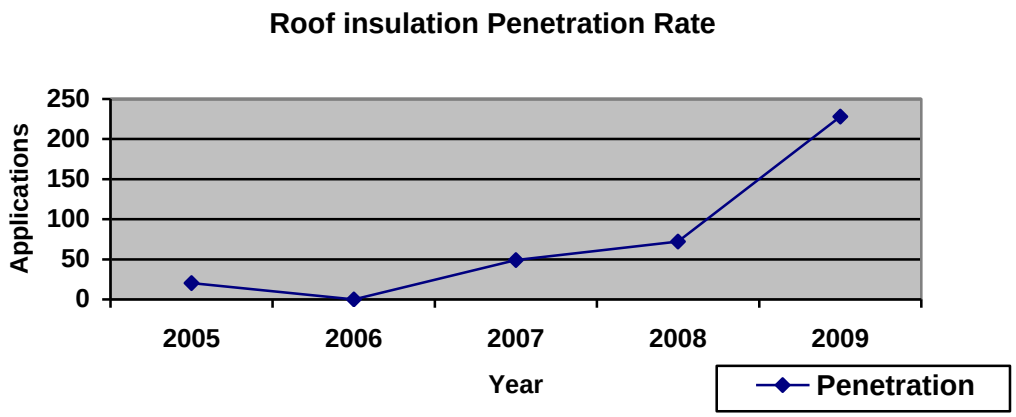
The scheme for the promotion of electric vehicles remained as in previous years. This included:

– a grant of €2,329 on the purchase of a new electric vehicle;
– removal of registration fees on electric cars and electric motor bikes;
– reduction of registration tax on hybrid cars to 16.5% (from 50.5% to 75% for similar cars);
– elimination of road licence for low powered two- and three-wheeled scooters; and
– exemption from payment of 'congestion' fees for entry of electric cars into Valletta.

Government has considered extending incentives to hybrid cars. Furthermore, the review of the registration and annual fees to a system based on emissions will further incentivise lower consuming vehicles. The penetration rate of electric vehicles is very low and plans are under way to set up a committee for the promotion of electric vehicles.

Roof Insulation

The grant for roof insulation was increased from 20% to 33% of the investment up to a maximum of €300. As a result, the penetration rate increased from 72 applications per year to 228 applications per year.



Double Glazing

A scheme for the installation of double glazing apertures was issued for the first time in 2009. The level of grant was at 33% up to a maximum of €300 similar to the scheme for roof insulation. The penetration rate was 167 applications per year.

CFL Scheme

The MRA administered the scheme, on behalf of Government, for the administration and distribution of free energy efficient light bulbs to households in Malta and Gozo. This involved a survey and proposals for alternative schemes.

Earlier in the year, retailers who were interested in participating in the scheme were required to register the proposed CFLs to ensure that they were up to the required EU standards. The scheme was then launched in June 2009 when 133,486 vouchers were issued to families in Malta and Gozo, leading to the distribution of 921,446 light bulbs.

European funded subsidy schemes

During 2009 the Authority submitted an application for EU funding for the promotion of energy efficiency and renewable energy sources in the residential sector and the industrial and commercial sectors. The residential sector scheme proposal included solar water heaters, photovoltaic panels, micro wind turbines, demonstration projects and an Education Campaign on Energy Efficiency. The project was accepted by the EU funding committee; however, commencement was delayed because of an interpretative note of the Commission regulation indicating that grants on solar water heaters could only be implemented for social cases.

A new set of eligibility criteria had to be designed to cater for social cases. Later on during the year the grant schemes for micro wind projects were omitted and funds allocated to the PV grant scheme. This was due to the restrictions imposed by MEPA on the installation of micro wind turbines. The European funded grant schemes were expected to be launched in 2010.

Subsidy schemes in the Industrial and Commercial Sectors

The Authority and Malta Enterprise are further promoting micro-generation renewable energy technologies in the commercial and industrial sectors. In 2009 a scheme was launched under the ERDF 2007-2013 programme to provide financial assistance to operators in these two sectors who wish to implement renewable energy and energy efficiency projects. The total funds available for the scheme amount to €10 million. Participants in this scheme were entitled to benefit from a 50% grant (maximum grant being €100,000). Through the first call for proposals of projects, over 1 MWp (1.5 GWh/annum) PV capacity was installed.

Notifications and Authorisations of Photovoltaic systems

The Authority continued to guide the public and other entities as it continued to administer the notifications and authorisations regarding renewable energy resources installations, primarily in photovoltaic technologies.

During 2009 the MRA received 167 notifications for the installation of photovoltaic systems and issued 24 authorisations to construct a photovoltaic system larger than 16 Amps per phase. Three licences to operators of photovoltaic systems to generate electricity for own use and generate electricity and sell to Enemalta.

Photovoltaic data gathering and generation statistics

The Authority requests the PV generators to forward the PV generation readings every end of September. This enables the Authority to:

- have actual annual generation figures of the PV systems;
- compare yields (kWh/kWp) of various technologies and systems; and
- give feedback on the PV generators' yield and return alerts in cases of abnormal low generation figures.

Combined heat and power feasibility in Malta

The European Directive 8 of 2004 instructed member states to conduct a study on co-generation, which included a feasibility study. The report 'Analysis of Potential for Co-generation on the Maltese Islands' was presented to the Commission in mid-2009. The analysis showed that the change in the electricity price structure made in October, 2008, made co-generation not only technically feasible but also economically feasible in a number of situations, most importantly the hotel and healthcare sectors, where heat is a constant requirement.

The feasibility study makes a projection of 42 installed machines reaching a total primary energy savings of 71 MWh and totalling a reduction of 20 ktons in CO_2 emissions. A feasibility study in two industrial parks was also initiated in 2009 by the MRA, the Malta Federation of Industry, Malta Enterprise and Malta Industrial Parks.

Participation in the PV-NMS-NET project

In November 2008 the Authority joined, as a partner, in the launching of an FP7 co-funded project on Photovoltaic new member state (NMS) networking. The PV-NMS-NET project aims to provide information on photovoltaic markets, the support mechanism and schemes in the new member states, comprising of Poland, Bulgaria, Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Romania, Slovakia and Slovenia.

During 2009, the initial work packages were addressed. These included providing and sharing information on each NMS's PV status, the market, the support schemes and tariff mechanisms, as well as the PV industry. The project also required the setting up of a harmonised data collection method, as well as defining the barriers present at each NMS for a sustainable development of the PV market. During this period, various reports were published and placed on the website.

The project also insisted on the drive to introduce a feed in tariff as a sustainable measure for PV uptake. Information on the project may be found at: http://www.pv-nms.net/pvnms/web/frontend.php/article.

RES 2020 targets and obligations

The new Directive for the promotion of use of energy from renewable sources requires that all EU member states reach an overall 20% target of energy derived from renewable sources. Malta's final target is 10% of renewable energy in the total consumption of 2020, including the use of 10% of renewable energy in transport. The Directive 2009/28/EC for the promotion of renewable energy provides for different options to meet targets ranging from local energy generation from renewable sources (RES), purchasing of certificates through statistical transfers, participation in joint RES projects with other EU countries and importation of renewable electricity from non-EU member states.

All the options have financial and economic implications and related risks that need to be considered to obtain the most convenient solution for Malta. A National Renewable Action Plan, describing how Malta intends to meet its obligations arising from Directive 2009/28/EC, must be submitted to the EU Commission by June 2010. The Authority produced a document during 2009 forecasting how Malta intends to meet the 2020 RES targets.

Feasibility Study for Increasing Renewable Energy Credentials

In 2008, a study was commissioned to investigate the best and most likely options Malta should consider to meet its renewable energy targets, in line with the proposed Directive for the promotion of the use of energy from renewable sources. This study was concluded in January 2009. The report compares the technical and commercial aspects of various scenarios: local energy generation from renewable sources (RES) by wind and solar, joint projects in RES with other EU countries or through interconnection with non-EU member states and the possibility of buying green certificates through statistical transfers.

The study recommended that the selection of the best option must assess the relative importance of the different benefits presented in relation to costs, risks, environmental impacts, security of supply and generation of local jobs. The study indicated that investing in a joint project, such as an onshore wind energy project elsewhere in EU, could be the most financially attractive option. If the strategic benefits of generating renewable energy within Malta are considered a priority, offshore wind would be a more feasible option since this would contribute a higher proportion of renewable energy than solar photovoltaic (PV) panels.

Wind farm study

As a promoter of alternative renewable energy, the Authority is co-operating with the Ministry of Resources and Rural Affairs on the wind farm project. The Authority has been sourcing wind data to create a national wind map. It was also involved in organising meetings with stakeholders in the aviation and maritime sectors to obtain their comments on the impact both onshore and offshore wind farms have on their operations.

Wind energy exploitation appears to be the most cost effective technology for local development, in that it is perceived as having the potential to contribute significantly to the generation of electricity in the medium term. In 2009, three sites were identified to be assessed for the development of wind farm facilities. The sites include two onshore sites, located at Baħrija and Ħal Far, with an estimated potential capacity of 10.2 MW and 4.2 MW, respectively, and one offshore site, Sikka l-Bajda, with an estimated potential of 95 MW. The three sites will be subject to all the necessary environmental impact assessments, as required by the applicable directives, and the local environment and planning regulations.

Wind Measurement Study

Besides the application requirements for the wind farm development, each site requires a wind measuring campaign to have valid data for developers interested in the potential and characteristics of each site. During 2009, the Authority and the Ministry for Resources and Rural Affairs obtained the necessary MEPA permits to erect a wind mast to acquire wind data characteristics at a site close to Sikka l-Bajda. Applications for the other sites were also submitted.

Wind monitoring is an essential first step in determining how much power can be produced over a period of time and how quickly the investment made can be paid back. It is also a requirement for any financing of the project.

The wind monitoring mast and equipment were erected at Aħrax Point at the end of October, 2009. Data collection commenced on 1 November, 2009, and the results are being posted regularly on our website.

The mast is 80 metres high and has a number of instruments attached to collect all the necessary data, including 10 anemometers to measure the wind speed, three wind vanes that measure the wind direction, and temperature and pressure sensors. The instruments that record the wind data are installed at different heights of the mast so that profiles of winds blowing from different directions are determined. The data collected is sent to a data logger situated at the bottom of the mast. This is then transmitted to a computer via a GPRS communications link to be analysed.

The wind mast is also equipped with bird deflectors, which are meant to discourage birds from flying close by.

Grid Stability Study

Due to the intermittent behaviour of wind power, the conventional generation plant must provide a spinning reserve capacity to guarantee continuity of the electricity supply. Since Malta has an isolated grid, the spinning reserve capacity is limited. This in turn puts a limit on how much wind generation capacity can be introduced into the Maltese system.

In line with the projected developments of large scale wind farms, a 'Grid Stability Study' was commissioned to Mott MacDonald to investigate the maximum permissible capacity allowable of a large scale wind farm so as not to jeopardise the electricity distribution system, inclusive of the Malta-Sicily interconnection planned for the same period.

Chapter 5

Mineral Resources Regulation

The Minerals Directorate is responsible for promoting and regulating the exploration and extraction of Malta's mineral resources. The aim of the Directorate is to assist in the development of the minerals extraction industry.

Licensing, Monitoring and Enforcement

Licensing

The Minerals Resources Regulation within the MRA Act grants the Minerals Directorate responsibility to issue quarry extraction licences. The Directorate was set up to ensure harmonisation of the planning environment and mineral resource requirements. During 2009 and 2010 there were 47 valid quarry licences in Malta and Gozo, 19 hardstone quarries and 28 softstone quarries.

The Authority issues applications for licence renewals and extensions of existing licences. Records are updated annually, as quarry status changes. To minimise the negative visual impacts, disused quarries are being restored, rehabilitated and returned to an environmentally acceptable state

Administration of mineral resources – development applications

Development applications in the Maltese Islands remain under the responsibility of MEPA. Several consultations between the Minerals Directorate and MEPA are held on applications for the extension of softstone and hardstone quarries, the restoration of exhausted quarries and other development planning applications.

Regulation

The regulations focus on operational issues – such as resource quality and extraction. These regulations affect all people who work in a quarry, and impose duties and obligations on the operator with respect to persons in or around the quarry. They also establish requirements to ensure good order and housekeeping of quarries, and good administrative practices, including record keeping. The regulations were issued for public consultation, giving ample time to the public and stakeholders to put forward their views.

An economic impact analysis on the newly proposed quarry operating licence fee is being undertaken. The rationale is to analyse and evaluate the implications of the quarry operating fee on the quarry owners and the MRA.

Review of the Minerals Policy

During the period under review the MRA embarked on a process to review the Minerals Policy.

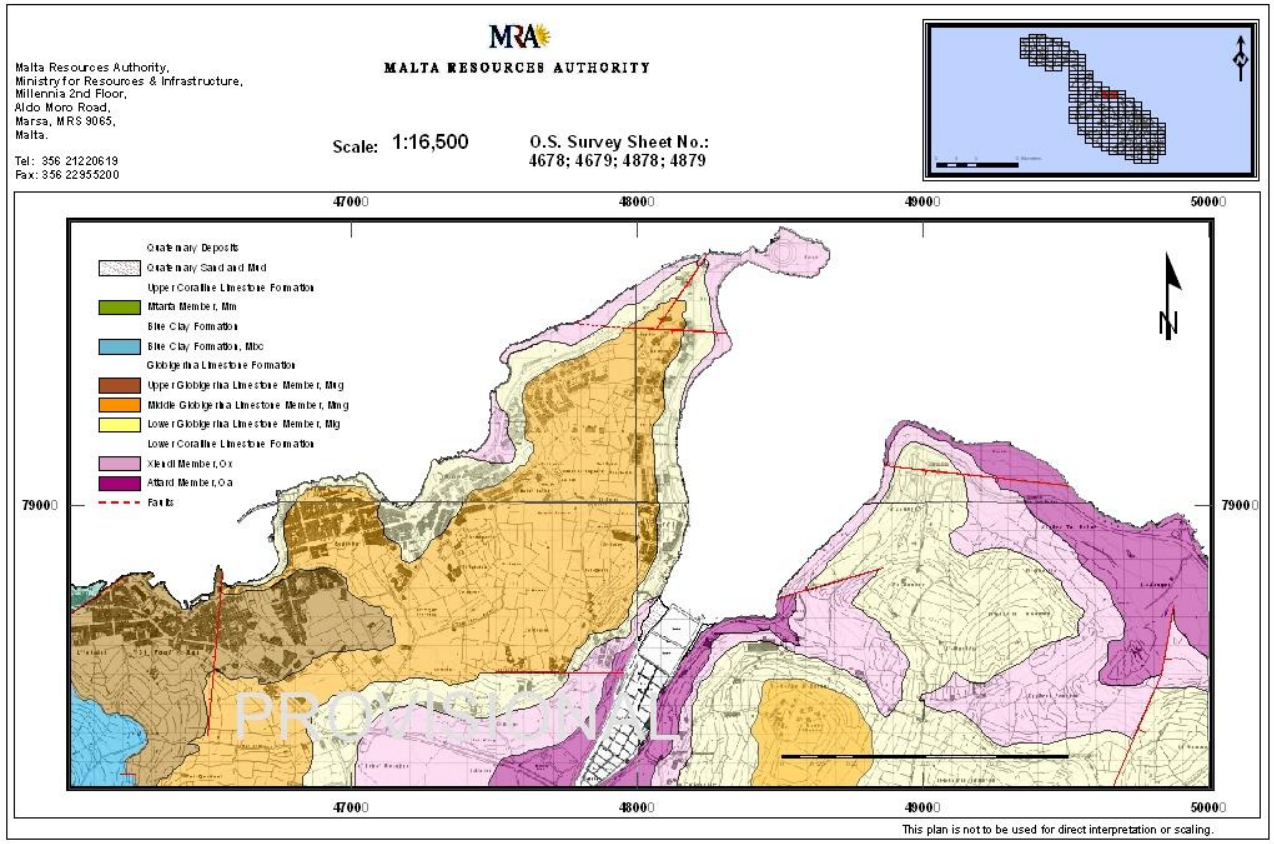
At present the issuing of a quarry licence is based on a Minerals Resources Management Plan built on economic, social and environmental considerations. These considerations are formulated in a comprehensive list of policies relevant to all phases of the extraction industry.

This review of policies will provide an overview of the actions taken by the Minerals Directorate.

Geological map of the Maltese Islands

The Minerals Directorate is in the process of updating geological information on Malta's mineral resources. This database will be an important tool for many professionals since it will provide a detailed view of geological formations and outcroppings at the surface of the Maltese Islands. This year a section of Gozo was covered.

The new area on Marfa Ridge is highlighted in the figure and a sample of a section is shown below.



Chapter 6

Water Resources Regulation

The Authority regulates the whole spectrum of services related to water supply and waste water. These functions are furthermore guided by the competencies assigned to the Authority by the Water Framework Directive (WFD) 2000/60/EC, which sets clear targets and deadlines for the achievement of water resource sustainability. The Directive provides the rationale and policy framework for water resources management requiring member states to adopt environmental and economical measures leading to this goal.

Within this perspective, therefore, the Authority strengthened its capacity to exercise its key role of addressing resource sustainability while ensuring compliance with the obligations of the WFD. Supply and demand issues were assessed holistically before a programme of measures was drawn up articulating the controls that ensure efficient water use. Due attention was given to the current economic scenario and national water needs.

During 2009, the Authority addressed policy measures structured within the WFD, focusing primarily on improved water governance with a view to better regulate and ensure a fair and equitable provision of water to the whole community, in the most cost-effective manner.

Groundwater Monitoring

Launch of the new Groundwater Monitoring Networks

Article 8 of the WFD defines a requirement for the establishment of programmes to monitor groundwater. These monitoring programmes are intended to provide the necessary information to enable the Directive's environmental objectives to be met. Monitoring will also allow the assessment of groundwater quantitative status and chemical status, and the identification of significant, long-term trends in groundwater quality.

In 2009 the first Surveillance Monitoring exercise was undertaken. Monitoring was extended to the smaller groundwater bodies in the islands, in line with the Directive's objective to focus more on resource quality. Detailed results from this monitoring exercise are presented as an Annex 1 to this document. The results of this surveillance exercise show that the main parameters of concern for groundwater quality in the Maltese Islands are nitrates and seawater intrusion-related parameters, chlorides in particular. No other pollution from dangerous substances, such as pesticides and heavy metals, has been detected so far in groundwater in Malta.

Regular monitoring will continue, according to the Directive's six-year cycle, with the launching in 2010 of a five-year Operational Monitoring exercise. Operational Monitoring will essentially focus on assessing the specific parameters which, from the results of the Surveillance Monitoring, were identified as posing a risk to the achievement of the WFD's objectives.

Monitoring for quantitative status (piezometeric levels) is currently only undertaken in the main sea level aquifer systems through an automated water level monitoring network. Discussions are under way with the Water Services Corporation for the eventual hand-over of these monitoring facilities to the Authority. Following an analysis of potential monitoring stations in the minor aquifer

systems, new locations were identified, some within private property, to develop a comprehensive network that would provide total coverage of all groundwater bodies in the islands.

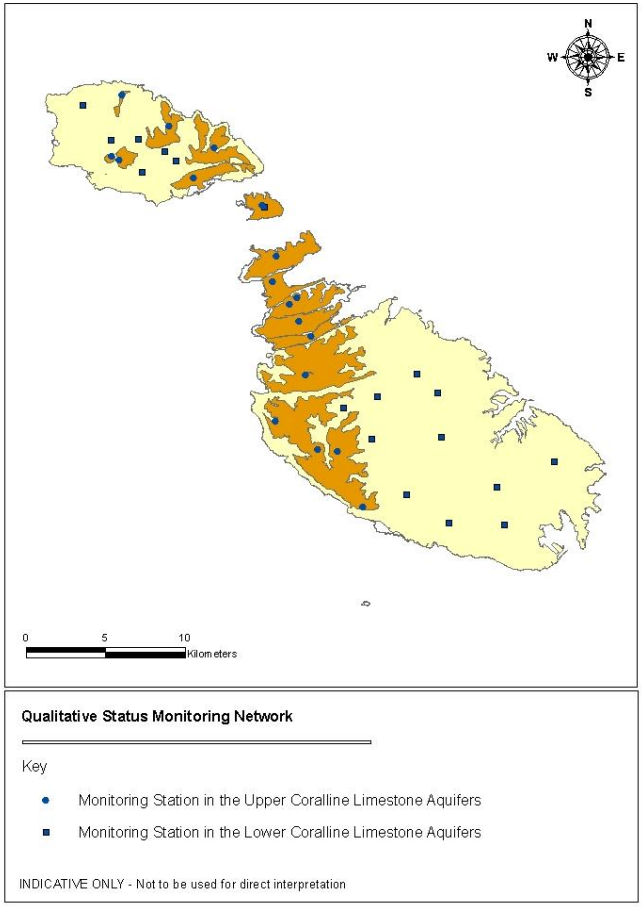


Figure: 1 Groundwater Qualitative Status Monitoring Networks

Quality Standards for Groundwater in Malta

The Groundwater Directive adopts groundwater quality standards for nitrates and pesticides, as defined in existing Community Legislation. Moreover, the Directive, under Annex II, also requires member states to establish national quality standards, or threshold values, for all "pollutants and indicators of pollution which, pursuant to the characterisation performed in accordance with Article 5 of Directive 2000/60/EC, characterise bodies or groups of bodies of groundwater as being at risk of failing to achieve good groundwater chemical status". This Directive sets out a minimum list of parameters for which member states are required to consider establishing threshold values.

An analysis of the results of the characterisation process carried out under Article 5 of the WFD and of historic groundwater monitoring results indicated that, in the case of Malta, the new threshold values had to be established on a groundwater body basis, owing mainly to the different characteristics of perched and sea-level groundwater bodies.

It was therefore decided that:

(i) Threshold values had to be established for a number of parameters related to seawater intrusion, the geogenic background of Malta's aquifer systems and anthropogenic pollution; and

(ii) No threshold values were to be set for certain parameters included in the Directive's minimum list, since these have never been detected in groundwater in Malta.

The established threshold values are:

Groundwater Body Grouping		Malta Sea Level GWB	Gozo Sea Level GWB	Other Sea Level GWBs	Coastal GWBs	Perched GWBs
Parameter	Unit	Threshold Value				
Chloride	mg/l	1,000	1,000	1000	500	210
Sodium	mg/l	450	450	450	450	160
Boron	mg/l	0.6	0.6	0.6	1	0.5
Sulphate	mg/l	475	475	475	475	190
Conductivity	µS/cm	4,500	4,500	4,500	3,000	2,000
Lead	µg/l	10	10	10	10	20
Copper	mg/l	2	2	2	2	2
Zinc	mg/l	3	3	3	3	3
Fluoride	mg/l	1.5	2.75	-	-	-
Arsenic	µg/l	5	7.5	-	-	-
Ammonium	mg/l	0.25	0.25	0.25	0.25	0.25

Table 1 Threshold values for Groundwater Bodies

Status Assessment and Proposals for Alternative Objectives to the Water Framework Directive

An analysis was made on the risk of failing to reach 'good status' for each groundwater body in the Maltese Islands. It was based on new and existing hydrogeological, quantitative (water level and water balance) and qualitative (chemical) data. The results of this assessment indicated that nitrate pollution was the single most important issue affecting the status of groundwater in Malta, where nitrate contamination was identified as a 'status-failing' issue in 13 out of 15 groundwater bodies.

Other important critical issues included seawater intrusion, surface contamination by seawater-related parameters and over abstraction. Saline intrusion in the sea-level groundwater bodies is a direct consequence of over-abstraction and hence constitutes a major factor on the quantitative status.

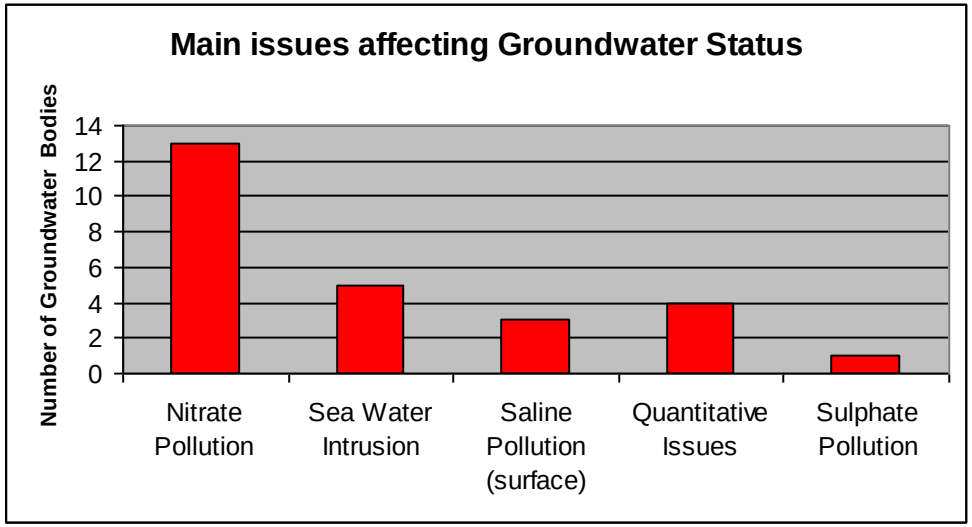


Figure: 2 Main issues affecting groundwater status

Groundwater bodies in Malta are characterised by relatively long response times and, as such, it is expected that the implementation of pollution management measures will not immediately lead to an improvement in the underlying groundwater body. Timeframes for changes in the status of groundwater were inferred from the conceptual models of these groundwater systems and the groundwater flow mechanisms inferred from natural isotope data[1]. They preclude the achievement of good status within the first planning cycle for those groundwater bodies, which have been assessed as currently being in 'poor' status.

As a result, extensions to the 2015 good status deadlines were proposed for these bodies of groundwater, based on the current understanding of the functioning of the aquifer systems. A summary of these alternative objectives is presented in the table below:

Groundwater Body Name	Code	General Status	Objectives	Date	Exemptions
Malta Mean Sea Level	MT001	Poor	Good	2027, or as soon as natural conditions permit after 2027	Extension of deadlines – Natural Conditions
Rabat-Dingli Perched	MT002	Poor	Good	2021, or as soon as natural conditions permit after 2021	Extension of deadlines – Natural Conditions

[1] IAEA (2000) and BGS (2009)

Groundwater Body Name	Code	General Status	Objectives	Date	Exemptions
Mgarr-Wardija Perched	MT003	Poor	Good	2027, or as soon as natural conditions permit after 2027	Extension of deadlines – Natural Conditions
Pwales Coastal	MT005	Poor	Less stringent objectives	2015	Less Stringent Objectives - Anthropogenic Impact
Miżieb Mean Sea Level	MT006	Good	Good	2015	No exemption required
Mellieha Perched	MT008	Poor	Good	2021, or as soon as natural conditions permit after 2021	Extension of deadlines – Natural Conditions
Mellieha Coastal	MT009	Poor	Less stringent	2015	Less Stringent Objectives – Anthropogenic Impact

Groundwater Body Name	Code	General Status	Objectives	Date	Exemptions
			objectives		
Marfa Coastal	MT010	Poor	Less stringent objectives	2015	Less Stringent Objectives – Anthropogenic Impact
Comino Mean Sea Level	MT012	Good	Good	2015	No exemption required
Gozo Mean Sea Level	MT013	Poor	Good	2027, or as soon as natural conditions permit after 2027	Extension of deadlines – Natural Conditions
Għajnsielem Perched	MT014	Poor	Good	2027, or as soon as natural conditions permit after 2027	Extension of deadlines – Natural Conditions

Groundwater Body Name	Code	General Status	Objectives	Date	Exemptions
Nadur Perched	MT015	Poor	Good	2021, or as soon as natural conditions permit after 2021	Extension of deadlines – Natural Conditions
Xagħra Perched	MT016	Poor	Good	2021, or as soon as natural conditions permit after 2021	Extension of deadlines – Natural Conditions
Zebbug Perched	MT017	Poor	Less stringent objectives	2015	Less Stringent Objectives – Anthropogenic Impact
Victoria-Kerċem Perched	MT018	Poor	Good	2021, or as soon as natural conditions permit after 2021	Extension of deadlines – Natural Conditions

Table 2: Exemptions and alternative objectives set for groundwater bodies in the Maltese Water Catchment District.

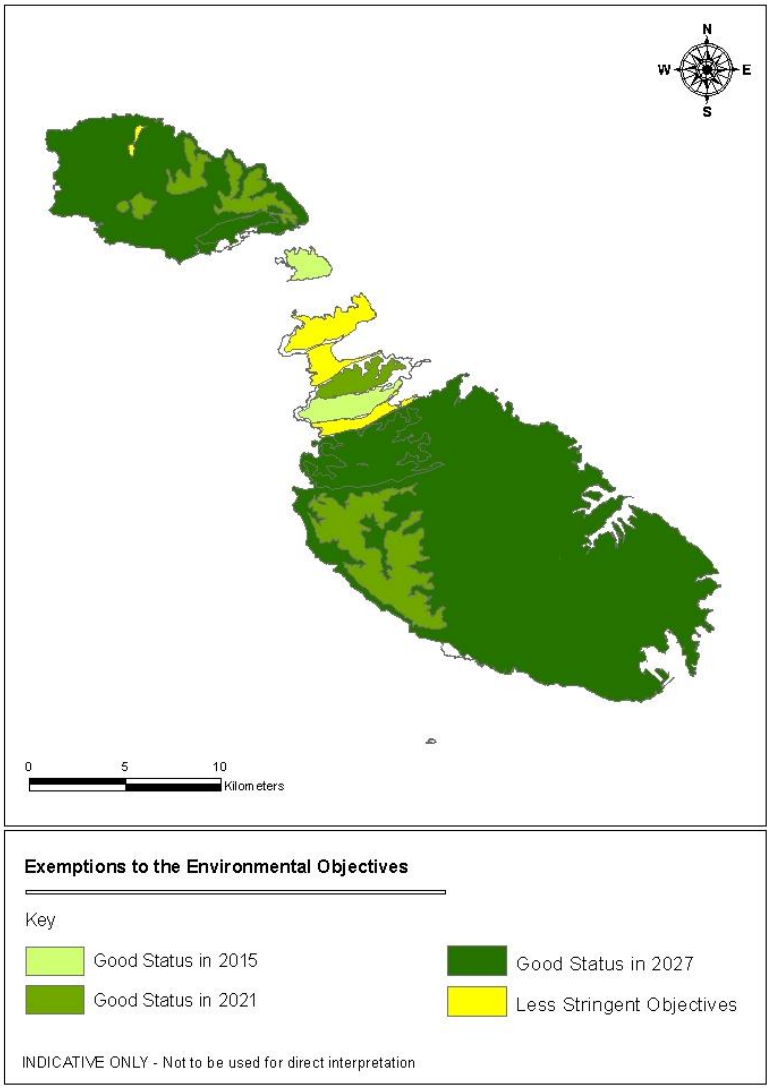


Figure: 3 Exemptions set for groundwater bodies in the Maltese Water Catchment District.

Development of a Programme of Measures

Following consultation with interested stakeholders in 2009, a number of measures were developed to address the main issues affecting Malta's groundwater bodies. These measures were developed in close collaboration with the Malta Environment and Planning Authority, which as the national Competent Authority on the Nitrates Directive was co-ordinating the development of a National Nitrates Action Plan, the implementation of which had an important bearing on groundwater qualitative issues.

The Authority was thus mainly involved in the development of measures addressing the quantitative status of groundwater, where the proposed way forward envisages two main lines of action:

(i) the launching of a number of initiatives aimed at addressing the main identified data gaps; and
(ii) the implementation of a number of water demand and supply augmentation projects on a pilot scale.

Water Governance

Notification of Groundwater Sources

The borehole notification process started on 6 October, 2008, and lasted for 30 days in terms of LN 255/08. Information submitted in the forms distributed was often inaccurate, obliging the Water Directorate to return those applications where data was found to be grossly misleading.

Some of the most common errors/omissions, included:

- wrong depths by scores of metres;
- wrong co-ordinates or, worse, missing coordinates;
- photographs showing supposedly buried boreholes under concrete slabs or floor tiles;
- Lacking details of co-usership; and
- Multiple applications on the same borehole (users in litigation).

By the closing date of the statutory notification period, the MRA received 2,642 applications, which when added to the 1997 registrations, sum up to around 7,986 private sources. A breakdown by declared use is shown in Table 3:

Declared use	Sources registered in 1997	Sources notified in 2008	Total
Irrigation	3,619	1,752	5,371
Animal husbandry	111	158	269
Domestic	755	51	806
Industry	46	82	128
Declared not in use	515	39	554
Others (including mixed use)	298	560	858
Total	5,344	2,642	7,986

Table 3: Breakdown of Registered and Notified Borehole Sources

Regulation of water tanker suppliers

The Water Supply and Sewerage Services Regulations LN 525/04 require all water and wastewater service providers to operate under a licence issued by the MRA. Until September 2009, these regulations were only partially brought into force and applied to the national utility, the Water Services Corporation, supplying water through the public water distribution network.

In 2009, Cabinet approved the requirement for bowser operators and water retailers to operate under licence after Section 3.1.a (iii) of these regulations were brought into force.

In November 2009, regulations (LN 337 of 2009) were also published establishing licence fees for water tanker operators, as well as charges for e-tracking. These include:

1 Annual licence fee	€200 per water tanker or trailer licensed to transport water;
2 Annual fee for e-tracking	€425 per water tanker or trailer licensed to transport water; and
3 One-time fee for installation of a water level sensor in the water tanker or trailer	€800 per water tanker or trailer licensed to transport water.

All existing operators were allowed three months to apply for a licence from the date of entry into force of the regulation. The table below provides a preliminary analysis of the applications received by the time of writing:

Number of water tankers indicated in applications:	126
Number of groundwater sources indicated in applications:	115
Number of sources referred to in more than one application:	25
Number of applicants that do not have a registered groundwater sources in their name:	24
Number of groundwater sources registered by applicants but not referred to in their application:	33
Number of applicants abstracting surface water from a valley in conjunction with groundwater sources:	2

All applicants were found lacking a valid Trading Permit, while most of the applications received were incomplete, requiring applicants to resubmit missing information. This situation led to endless delay in data processing and no licences were issued by the end of 2009.

Subsequently, three applicants decided to cancel their application since they stated that the water was being transported for their own use and not for sale to customers.

The water retail sector was never regulated in the past. Operators were generally reluctant to observe and come into line with the new regulations. It was discovered through the application process that 40% of the water tankers/trailers indicated on the applications were not registered with the Malta Transport Authority (ADT) to transport water. A licence could not therefore be issued by the MRA unless the vehicles used for this purpose were appropriately certified by the ADT.

Metering of Boreholes

In July 2009 Cabinet directed the metering of all groundwater sources supplying more than 1 m^3/day. The Groundwater Abstraction (Metering) Regulations were drafted, establishing the regulatory framework for metering of groundwater sources registered or notified under the 1997 or 2008 regulations.

These regulations establish provisions related to the requirement for metering of all groundwater sources with some exceptions, namely:

a) sources that are located in the perched aquifer and where abstraction is less than 1 m^3/day;
b) sources that may be of cultural heritage (old *spejjer)*; and
c) sources where no pump or mechanical device is installed to abstract groundwater.

The regulations also include other conditions and requirements related to temporary suspension of metering (for purposes of pump maintenance, etc.), closure sealing and decommissioning of groundwater sources, and inspection and enforcement powers of the MRA. Power for *ex officio* estimations, where meters are found to be defective or tampered with, are also included in these regulations.

By the time of writing this report these regulations were yet to be published.

Water Pricing – Review of water tariffs

The Authority was requested to approve the water and electricity tariffs proposed by the Water Services Corporation in their updated 10 December, 2009, KPMG reports.

The December review was required to take account of the additional costs arising from increases in the price of oil and also to consider rises in overhead costs, including interest payments on EIB loans. It focused on:

- The cost of producing and supplying water to the final consumer; and
- The impact of approved prices on the final consumer (residential and commercial/industrial).

Review Criteria

The fundamental principles used in the evaluation process as a basis for the December 2009 water tariff review were:

Legality – the process and methodologies adopted must conform to applicable legislation, regulations and directives, including the legal obligation not to operate at a loss.

Sustainability and profitability – the proposed tariffs should enable the WSC to achieve an acceptable rate of return on current and future capital employed. This would enable the Corporation to service its existing debt obligations and sustain an acceptable fixed asset replacement and upgrade policy.

Non-discrimination – the proposed tariffs must not unjustifiably discriminate between comparable groups of consumers and must avoid potential cross subsidisation within different consumer groups.

Transparency – the entire tariff revision process should be transparent with consumers being provided with sufficient information to enable them to secure an acceptable understanding of how:

i) the proposed tariffs were computed; and

ii) the Malta Resources Review and approval process was carried out.

The Review Process

The following parameters were taken into account throughout the assessment process:

- The impact that increases in electricity costs will have on the WSC's costs for the 12 months from 1 January, 2010, to 31 December, 2010;
- The Corporation's latest projected cost base for the 12 months ending 31 December, 2010;
- The cost of wastewater, which was not included in the tariff revision of October, 2008;
- The Government subvention of €14.176 million for 2010 to cover part of the wastewater costs;
- On the basis of national interest, grouping WSC's electricity accounts for billing purposes only; and
- The return on capital employed (ROCE) was limited to the interest on the WSC's existing debt.

The review showed that the WSC adhered to the approved principles in computing its respective target revenue. The tariffs proposed by the WSC were sufficient to cover the costs needed to produce and supply water to the final consumers, less the government subvention. The MRA agreed to limit the ROCE allocation to water to the interest due on existing WSC debt.

Stakeholder consultation, information dissemination and public participation

Development applications for consultations (MEPA)

The Malta Resources Authority regularly receives requests from MEPA for consultation on Planning and Development Applications. A breakdown is shown in the following table.

MEPA consultations	
LPG Primary and Secondary Storage	9
Liquid fuel secondary storage	4
Petrol stations	5
Wind energy	6
Photovoltaic installations	1
Generator	3
Roads, tunnels and trenches	4
Building complexes	17
Agricultural concerns	250

MEPA consultations	
Industrial facilities	11
Quarries – water issues	10
Landfill rehabilitation water issues	1
Residential farmhouses	18
Quarries – soft stone and hard stone	10
Quarries rehabilitation	4
Quarries development	3
Others	68
Total	424

Participation in Projects

Nitrate Isotope Source Tracing

A study carried out by the British Geological Survey (funded through the Rural Development Programme for Malta) investigating the impact contribution of different superficial sources of nitrate on the actual contamination of the aquifers was concluded in 2009. The project involved the identification of the 'isotopic signature[1]' of the various potential sources of nitrate pollution present in the Maltese islands. Through an intensive sampling and analytical programme, the stable isotope composition of oxygen and nitrogen in the nitrate ion were tested in a number of samples taken from soils, manure and artificial fertiliser. The resulting isotopic signatures of these potential pollution sources were then correlated with the prevailing signature of the nitrate present in the underlying groundwaters.

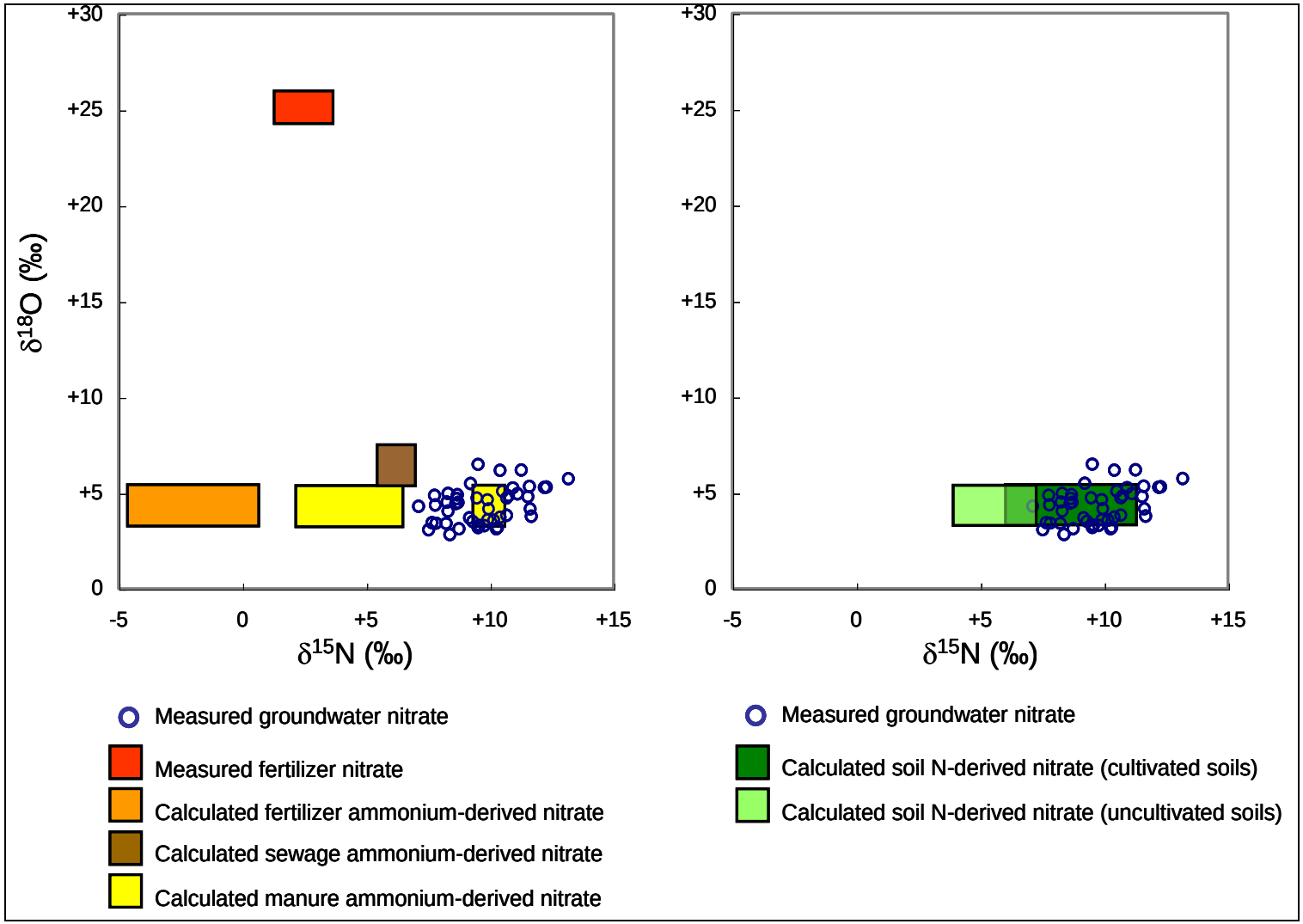


Figure 1: Summary of δ15N and δ18O in nitrate in groundwater and various potential nitrate sources

The results of the project (shown graphically in Figure 1) showed that the leaching of nitrate from cultivated soils is likely to be the most significant source of nitrate contamination. These results indicate a physio-chemical process whereby nitrogen from inorganic fertilizers and/or animal wastes is assimilated into the soil organic nitrogen pool, before nitrification and leaching to the underlying groundwater.

FP6 – CLIMATEWATER Project

The Directorate for Water Resources Regulation continued its participation in the CLIMATEWATER Project in 2009. The overall objective of this project is to study European and international adaptation measures and strategies related to climate change impacts and how these are taken into account in water policies. The project will formulate a coherent framework on adaptation strategies of climate change impacts on water resources, water recycling and water uses of the society and nature with special regard to those that water policy has to take into account when considering climate change impacts.

In this project, the Authority is mainly involved through its expertise in the implementation of the Water Framework Directive in Malta, and in co-ordinating an analysis of the flexibility of the implementation methodologies of the Water Framework Directive and the Groundwater Directive in view of the long-term changes predicted by current Climate Change scenarios.