

**REVIEW AND CRITICAL ASSESSMENT OF THE
LEGAL FRAMEWORK FOR GROUNDWATER IN
MALTA**



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Executive Summary

Malta does not have many fresh water resources. However, it does not suffer from a lack of drinking water, as its needs are met through the use of groundwater and through a network of reverse osmosis plants, built over the past twenty years. But, in view of the local hydroclimatological conditions, including low rainfall and high evapotranspiration rate, the relatively dry season, small surface area, irregular topographic relief and the characteristics of the aquifers, Malta has limited natural water resources which have to be duly safeguarded.¹

The extraction of groundwater as a source of potable water, was used by Maltese authorities, for hundred of years, but a look at the history of Maltese legislation on the matter, indicates that groundwater has only been recently recognized as a resource and regulated as such. In fact in 1886 when the Civil Code was being drafted, water was considered as a natural resource which falls from heaven, but now it is recognized as an economic good. Nowadays there are a number of laws and regulations addressing water management in Malta.

The Civil Code and the Code of Police Laws are the earliest legal sources regulating water resources. The Civil Code regulates the collection of natural water resources and identifies who has the right to collect water which flows naturally on land. Water management under the Civil Code is mainly regulated under Title IV of Praedial Easements². These provisions indicate that the competent authorities of that time, recognized the need to regulate the use of natural water, and they tried to adopt a system where natural water will be collected and not wasted. These provisions are still present in the Civil Code and enforceable in a Court of Law.

On the other hand the Code of Police Laws tries to protect “*public waters*”, as desalination plants were not in use at that time, public water must have referred to sources of groundwater. Furthermore it was under the Code of Police Laws, that the regulation of pollution was first introduced. This is the earliest piece of legislation indirectly applying the ‘polluter pays’ principle, and which is still enforceable.

Although the legal status of the Codes is hierarchically superior, to primary and subsidiary legislation, this hierarchic superiority is waived when more recent and more specific primary and subsidiary legislation comes into force. In 1991, the Water Services Act was promulgated, which regulated the management of water resources. This law repealed two Ordinances that regulated the abstraction of groundwater as well as the use of groundwater for irrigation, namely the 1939 Irrigation Ordinance and the Groundwater Ordinance.

It was essential to assess these repealed Ordinances for the purpose of this report in order to:

¹ Actes del I Congres Balears 2015. L'aigua. Perspectives de future, paper presented by Ernest Azzopardi, Institute for Water technology (Malta) *The Development and management of Water Resources in the Maltese Islands*; p.165

² Praedial easements are servitudes for the benefit of land i.e. it is the land, which enjoys a right over a neighbouring land. Chapter 16 of the Laws of Malta, Sections 403-406.

1. Ascertain whether certain practices still exist despite the repealing of the legal obligations.
2. Assess whether the repealing of these Ordinances left any lacunae in Maltese law.
3. Identify the public authorities which have taken over the role of the institutions which existed under the repealed Ordinances.

In fact in 1938, the government decided to enact the 1938 Water Pumps Ordinance in order to control better the use of Water Pumps which in certain areas, it was seriously interfering with the public water supplies. Such control was affected through the registration of all water pumps, which registration served to set up an inventory of all pumps used for extracting groundwater. This type of registration in fact may be reintroduced to comply with obligations set by the Water Framework Directive, recently transposed into Maltese legislation³.

At the same time a measure of protection was introduced by the declaration of “*Water Controlled Areas*”, whereby the use of water pumps could have been prohibited or restricted. Water Pumps found in these areas had to have a licence provided by the Water Board. These Areas will now be subject to management plans which will identify basic and supplementary measures for guaranteeing a good conservation status for groundwater as required by subsidiary legislation transposing the Water Framework Directive⁴.

The 1938 Ordinance was repealed by the 1943 Underground Water Ordinance⁵ which added more details and restrictions. In fact all kinds of water pumps had to be licensed and licensing was also to be obtained for the importation, manufacture, buying, acquisition, sale, disposal, possession and control of water pumps.

Furthermore licensing was also required:

1. To sink or extend or modify a well
2. Install or modify a water pump for the drawing of water from a well by existing pump
3. To maintain well in a workable condition.

The powers to issue these licences are now found under the Malta Resources Authority Act. The aim of these Ordinances was to control the quantity management of the resource, but it did not in any way attempt to address the qualitative nature.

In 1939 the Irrigation Ordinance⁶ was enacted by the Minister responsible for Agriculture. This was the first Ordinance which gave a direct definition to the term underground water, and it was defined as “*water that is filtered through the soil and the underlying strata or flowed through natural fissures into the water table*”.

³ Draft Regulations establishing a Framework for Action in the Field of Water Policy.

⁴ Ibid

⁵ This Ordinance is no longer legal source since it has been repealed.

⁶ Even this Ordinance has been repealed.

This Ordinance also established '*Irrigation Areas*'. In such areas the permission of the Board was needed to:

- sink any well
- bore any hole
- dig any trench

for the purpose of obtaining underground water, or carry out any work whatsoever which reduces or interferes with the government supply of water in the Area. Like in the previous Ordinances, the scope of this ordinance was that to control the quantity of groundwater which was being extracted.

When in 1991 the Water Services Corporation Act was enacted, the role of regulator and operator were attributed to the Water Services Corporation and a later in the year 2000, there was the enactment of the Malta Resources Act. These two Acts have to be seen together, since both Authorities have been set up to preserve and control the supply of water. The difference in functions is that the Water Services Corporation is designated as having the role of an operator whilst the Malta Resources Authority is the regulator.

The Water Services Corporation succeeded the Water Works Department and assumed its responsibilities and functions when it was established in 1992. The Water Services Act empowers the Water Services Corporation to acquire, transform, manufacture, distribute and sell potable and non-potable water. It is also entrusted with the treatment and disposal and re-use of sewage and waste water and re-use of storm water run-off.

Despite the fact that this Act does not have a definition of underground water, yet still there is an operative part, which lists the duties of the Corporation with respect to the supply of under groundwater. In fact the Water Services Corporation has the operative function "*to survey, inspect or cause the sinking of bores.... for the purpose of ascertaining ... the presence, quality or quantity of underground water....*". This section is the first legal provision which provides for the quality of groundwater.

This provision was later amended by the Malta Resources Authority Act⁷, in order to specify the separate roles of the Water Services Corporation and the Malta Resources Authority. In fact the Malta Resources Authority Act deleted all provisions under the Water Services Corporation Act which empowered the Water Services Corporation to issue licences for the supply, sale or any other functions concerning water, water pumps and other apparatus related to the supply of water.

The Malta Resources Authority Act also omits to give a direct definition to the term of underground water. It can be interpreted to be included in the definition given for the term water.

The functions of the Malta Resources Authority, which has a Directorate for the regulation of water resources, have been fashioned upon the functions laid down in the Water Services Corporation Act. The only difference is that the Malta Resources Authority is safeguarding and managing water resources through the adoption of

⁷ Chapter 423 of the Laws of Malta

regulations and granting of licences, whereas the Water Services Corporation is performing its duties and implementing these functions as the operator of water resources.

Together with these Acts one has to include also the Environment Protection Act of 2001. Under this Act, the wide definition of the term “*environment*” includes also “*water*”. The Competent Authority under this Act is the Malta Environment and Planning Authority (MEPA) which is entrusted with the implementation of Government’s duties under this Act. Furthermore MEPA has to co-operate and make arrangements with other entities, to better monitor the implementation and compliance with the provisions of this Act. This can be done through the adoption of Memoranda of Understanding between MEPA and other Authorities such as Malta Resources Authority. Such co-ordination is needed between these two Authorities in order to establish which will be the Competent Authority to grant licences with respect to operations relating to the extraction, use or other forms of management of groundwater. However, this Act also provides that the Minister responsible for the environment may issue regulations under the Environment Protection Act, and may establish that another person or body besides MEPA shall be responsible for the performance of those regulations.

Under the Environment Protection Act there are two other institutions established which may help considerably in the management and protection of groundwater resources. These are the National Commission for Sustainable Development which is an advisory Body entrusted with the rôle (amongst others) of assessing whether natural resources are being utilized in a sustainable manner. There is also the Environment Protection Fund, which may be used to finance the enhancement of groundwater resources. The Fund’s Chair has the legal right to institute an action for environment damages when degradation to the environment occurs. Since the term environment may be interpreted to include also groundwater, one may argue that the Chairman of the Fund, may take action for environment damages against any person, or entity such as the Malta Resources Authority and Water Services Corporation, if they are responsible through their negligence or non-performance of their duties, for the degradation of groundwater.

The acceptance of the application submitted by Malta, to become a member State of the European Union, triggered off the harmonization of laws process which led to a total rehaul of Malta’s legislative system, particularly in the field of environmental management, as this sector was poorly regulated. The regulation of water resources and in our case of groundwater, could no longer remain piecemeal and fragmented. Regulation of Ground Water Management in Malta needed to be harmonized with the relative sources of the *acquis communautaire* which are comprehensive and holistic in their approach.

The Malta Resources Authority Act and the Environment Protection Act led the way for the adoption of subsidiary legislation which have transposed into Maltese legislation, two EU directives regulating groundwater namely the Water Framework Directive and the Groundwater Directive. These two Directives provide for specific measures for the protection of groundwater. Subsidiary legislation has two important advantages over principle legislation, expediency and flexibility.

The Regulations for the Protection of Groundwater against Pollution caused by Dangerous Substances 2002⁸ is the legal instrument which adopted into Maltese legislation the Groundwater Directive⁹. This is the first regulation completely adopted for the protection and management of groundwater, wherein also a definition of the term groundwater is given. Groundwater has been defined as, “*all water, which is below the surface of the ground in the saturation zone and in direct contact with the ground or sub soil*”. These regulations are particularly aimed to protect the quality of groundwater, against pollution caused by dangerous substances. The term pollution has been given a wide definition and pollution in groundwater occurs whenever there are “*anthropogenic direct and indirect discharges of substances,.... which might endanger human health or water supplies, harm living resources and the aquatic ecosystem or interfere with other legitimate uses of water.*”

The Malta Resources Authority is the Competent Authority which will take preventive measure, grant authorization and the required licences, do investigations, monitor and implement the provisions of these regulations. Due to the fact that certain provisions lay down general obligations, and in some of them there is not a set up of thresholds which, would determine when quantities and concentrations are likely to cause deterioration in the quality of groundwater, the Malta Resources Authority has to set out its own policies on this matter.

These regulations also provide for the ‘*polluter pays*’ principle. Another innovative obligation concerning specifically groundwater is that any person who is found guilty of polluting the groundwater shall be guilty of an offence, which entails a pecuniary punishment or imprisonment or both. Hence the provision of the ‘*polluter pays*’ principle has been introduced to serve as a deterrent and enhance better protection of groundwater from pollution.

The Water Framework Directive¹⁰, adopted through Maltese legislation by the Water Policy Framework Regulations, 2004, establish a framework of Action for the protection of “*inland surface waters*”, “*transitional waters*”, “*coastal waters*” and “*groundwater*”.

These regulations designate the Malta Resources Authority as the Competent Authority in so far as “*inland water*” is concerned. Hence it is the competence of Malta Resources Authority to take all necessary measures to ensure that the environment objectives established under these regulations are met and to coordinate “*all programs of measures for the whole of the catchment district.*” Malta Resources Authority has a number of obligations to implement under these regulations in order to ensure good management, as well as to protect groundwater from pollutants. This exercise of implementation entails a lot of work and studies to identify water catchment districts, to see which areas within these districts require special protection under specific legislation for the protection of groundwater. The regulation lays down time frames for the Competent Authority to achieve and start adopting the required implementation measures. This framework has to be worked out together with the public. In fact the Competent Authority must ensure that the public is consulted and

⁸ LN 203/2002.

⁹ Council Directive 80/68 on groundwater

¹⁰ Council Directive 2000/60/EC of 23rd October 2000 establishing the framework for the Community Action in the field of water policy

informed. Furthermore the regulations also oblige the Competent Authority to encourage that active involvement of interested parties in the implementation of these regulations, particularly in relation to the formulation, review and updating of the water catchment plans.

These regulations provide new obligations, and new implementation measures, which the Competent Authority has to follow in order to protect both the quality and quantity of groundwater in line with European standards.

Other directives like the Nitrates Directive, the Habitats Directive, the Landfilling of Waste Directive, the Plant Protection Products Directive and the Environment Impact Assessment Directive which also have an impact on the regulation of groundwater were also transposed into national legislation leading to a comprehensive legal framework addressing groundwater management for the very first time in Malta's legal history. The Strategic Environment Assessment Directive and the Biocides Directive although not published as yet should be imminently transposed into Maltese legislation and put into force.

Whilst analyzing the legal sources and the history of Maltese legislation relating to groundwater, it is evident that although private ownership of groundwater is still not legally enforceable, the rights of the landowners have been encroached upon and are now qualified by many legal obligations which the public authorities can enforce to maintain a good groundwater conservation status. Unfortunately however enforcement is virtually absent mainly because there are still serious legal lacunae which do not allow the enforcement of basic rules like illegal prospecting and illegal abstraction of groundwater.

Although recent subsidiary legislation has introduced many new monitoring measures like licensing and the keeping of registers, as well as new development and strategic planning measures like the legislation transposing the EIA and the SEA Directives, as long as illegal abstraction is not enforceable due to the absence of the requisite subsidiary legislation to put into effect the enabling provisions of the Malta Resources Authority Act, there cannot be effective implementation of the comprehensive legal framework Malta is now endowed with.

Sources of Maltese legislation concerning groundwater protection and management, indicate that despite its private ownership status groundwater must be protected for the benefit of the community. Furthermore Malta's need to harmonise its laws with those of the European *Acquis Communautaire* because of its membership in the Union on 1st May 2004 hastened the evolution of the legal process relating to groundwater conservation.

Competent Authorities and the required institutions have been set up in order to ensure effective implementation of these new regulations. These Authorities are public entities but they have a separate judicial personality from Government. The Government remains responsible as it is the Minister under whose portfolio these authorities fall that is accountable to parliament and who has the power to issue subsidiary legislation. Although there is no written legal provision which, specifically declares that groundwater is a national resource, all the legislation concerning

groundwater, establishes a legal framework of control and management of groundwater resources in the national interest of all.

The various public entities having a regulatory role, need to work together and set up Memoranda of Understanding to ensure a smooth administrative network which would guarantee effective administrative management for the groundwater resource, which is scrutinized by the Government. This separate of powers helps to curb any abuse of power in such administrative functions.

Furthermore it is important to review practices currently in use, especially if these no longer have a legal backing, and ensure that the cancellation of past legislation did not result in any lacunas that are not addressed by legislation currently in force. At present competent authorities together with the Government, are working to implement the obligations of the new regulations. Now is the best time to study and investigate what has been left out and what else needs to be introduced in our legal framework in order to protect better both the quality and quantity of groundwater as an important economic resource for these islands.

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**PART ONE: ANALYSIS OF THE LEGISLATION AND
ADMINISTRATION.**

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1. List of Legislation

The Civil Code, Chapter 16 of the Laws of Malta

The Code of Police Laws, Chapter 10 of the Laws of Malta

The Water Pumps Ordinance, Ordinance XII of 1938 (repealed)

The Irrigation Ordinance of 1939, Chapter 105 of the Laws of Malta (repealed)

The Underground Water Ordinance of 1943, Chapter 114 of the Laws of Malta (repealed)

The Water Services Corporation Act of 1991, Chapter 355 of the Laws of Malta.

The Malta Resources Authority Act, of 2000 Chapter 423 of the Laws of Malta

The Environment Protection Act, of 2001 Chapter 465 of the Laws of Malta

LN 203/2002 The Regulations for the Protection of Groundwater Against Pollution caused by Dangerous Substances 2002 transposing Council Directive 80/68 on Groundwater

LN 194/2004 The Water Policy Framework Regulations transposing The Water Framework Directive 2000/60/EC.

LN 168 of 2002 Waste Management (Landfill) Regulations, 2002 transposing Landfill Directive 1991/31/EC

LN 23 of 2004 The Quality of Water intended for Human Consumption Regulations 2004 transposing Directive 98/83 EC on the Quality of Water for Human Consumption

LN 343 of 2001 The Protection of Waters against Pollution caused by Nitrates from Agriculture Sources Regulations, 2001 transposing Nitrates Directive 91/43/EEC

LN 115 of 2004 the Plant Protection Products Regulations, 2004 transposing Directive 91/414 EEC on Plant Products

LN 257 of 2003 The Flora, Fauna and Natural Habitats Protection Regulations, 2003 transposing the Habitats Directive 98/83 EC

LN 204/2001 The Environment Impact Assessment Regulations transposing the Environment Impact Assessment Directive 85/337 EEC as amended by 2003/35/EC

2. Ownership or other Legal Status of Groundwater

2.1 The Codes

The Civil Code and the Code of Police Laws are the earliest written legal sources regulating water resources which are still in force, today. The Codes must have codified custom, based on the basic principles of Roman Law, which existed at the time. In fact when the civil code was being drafted in 1886 the popular perception was that water is a natural resource which falls from heaven. It is within this context that a Civil Code regulates, under the title, “*of Praedial Easements*”, the management of water resources¹¹.

The provision of the Code however which regulates the status of ground water found in a tenement, states:

“Whosoever has a spring within his tenement may make use of it as he pleases, saving any right which the owner of a lower tenement may have acquired by title or by prescription¹²”.

One can see therefore, that once there is a spring and here spring is referring to a source of ground water over the land, it can be enjoyed and used freely. The only exception arises if for example this spring of water in the upper tenement, is allowed to flow in the lower tenement for more than 30 years. If this prescriptive period passes then the proprietor of the lower tenement acquires the right to make use of that spring.

The owner of the higher tenement may cause the water which runs through the public road to be led into his own tenement, in preference to the owner of the lower tenement¹³. In the case of owners of tenements placed on the same level, each of such owners may cause the water, which runs on that half of the road, which is contiguous to his tenement, to be led into such tenement¹⁴. The rules above mentioned however are qualified according to the users’ priorities. Owners requiring the water for the human use, or for watering animals or for watering trees which are ordinarily watered; have in that order, the right of preference over others, who¹⁵ require the water for other uses.

One must note that the wording used in the above-mentioned provision relating to the status of groundwater under the Civil Code is “*the right of use*”. The unhindered right

¹¹ Praedial easements are servitudes for the benefit of land; i.e. it is the land which enjoys a right over a neighbouring land such that if there different owners, ownership rights are qualified by a servitude towards the neighbouring land. In fact the land which enjoys the servitude is called the “*dominant tenement*”, whereas the land which is to suffer the exercise the servitude is the “*servant tenement*”

¹² Chapter 16 of the Laws of Malta Section 404.

¹³ Ibid Section 405 (1).

¹⁴ Ibid 405 (2).

¹⁵ Ibid Section 406

of use of property is an intrinsic aspect of ownership and as Maltese law relies on Roman law concepts relating to ownership of land, this provision is interpreted to mean a vertical right of use, over anything located within the property, subject of course to any other rights acquired by others over the tenement, referred to above.

The provisions of the Civil Code therefore in accordance with tradition and the basic principles of Roman Law and the Napoleonic Code, indicate that ownership of ground water *prima facie* pertains to the owner of the land above. This right of ownership however which as we have seen is expressed in terms of “*right of use*”¹⁶, as the owner of the tenement deems fit, is qualified by the other duty to respect rights which other persons may have acquired. Private ownership of land therefore, under the Civil Code, entails the unrestricted enjoyment and use of the groundwater located thereunder, limited only by the equal rights of the neighbouring landowners.

The Code of Police Laws¹⁷, entrusted with the keeping of administrative law and order, regulates the use of what it refers to as “*public waters*”. These are not defined anywhere in the Code but “*public water*”, could only be sources of groundwater as there are no surface water sources, on the Islands and at that time no desalination plants.

*“No person shall take away from any aqueduct, fountain, cistern, conduit or other like place, public water, not provided for the gratuitous use of the public, without the permission of the officer in charge of the distribution of public waters”*¹⁸.

This provision indicates that there existed sources of ground water which were public and a communal commodity. From the wording of the provision above, there seemed to be two types of water sources - those allowed for the gratuitous use of the public and those which were not. Use of the latter groundwater resources required permission from a public officer, “*in charge of the distribution of public waters*”.

So at turn of the 20th century there existed a hybrid situation in Malta, whereby ground water occurring below a private tenement entailed unrestricted enjoyment of the resource subject to the equal rights of neighbouring landowners, whilst there were also groundwater sources termed as “*public waters*”, which could be used by any person against the granting of an authorization and probably against the payment of a fee, because these “*public waters*”, which required permission for use, were distinct from other waters provided for the “*gratuitous use of the public*”.

In Malta, at the time, in fact till well into the 1950s, there existed sources of groundwater which were available for use, by the public gratuitously. Ground water was drawn by hand-pumps which existed in every Maltese town and village and this was a gratuitous water supply for families, when not every Maltese household had a water supply system at home. Eventually as more and more households got their water supply system, these pumps fell into disuse and were removed.

¹⁶ Vide Supra Page 1

¹⁷ Chapter 10 of the Laws of Malta.

¹⁸ Ibid, Part VII Section 148.

2.2 The Repealed Ordinances

For the purposes of this report, it is important to go through the historic evolution of the legal principles that have addressed the regulation of the status of groundwater, hence it is essential to refer to three primary sources of legislation which have been repealed in order to be able to what extent, have these repealed legal sources contributed to the obtaining position of Maltese law regulating groundwater.

The situation however changed in the late 1930s. The Water Pumps Ordinance of 1938, aimed at restricting the right of extracting groundwater by the private landowners of the tenements where the ground water resources were located. The registration of water pumps, provided the Water Board with an inventory of the sources of extraction, giving the authorities more information about the volume of groundwater being extracted, on the Islands. The power to declare areas as, “*Water Controlled Areas*”, therein restricting or even prohibiting the use of water pumps, was certainly a significant, albeit an indirect encroachment upon the landowners’ unrestricted groundwater use and extraction rights. The Governor therefore, brought the construction of wells and the extraction of groundwater resources in Water Controlled Areas under its direct control by stipulating that such operations if allowed, were subject to a permit from the Water Board.

The Governor therefore conveniently avoided addressing the issue of legal status of ownership of groundwater. By allowing for compensation for prohibiting or restricting extraction of groundwater in a private tenement, the status of private ownership was acknowledged, nevertheless the control of groundwater extraction by the government, introduced the notion of “*public property status*”, accruing to groundwater, by vesting in the Government the right to regulate the use of groundwater resources, for the benefit of the population as a whole. This was definitely the first step marking the transition from unrestricted private ownership, to regulation. So it is understandable that the right to compensation was included, as a political sweetener to cushion the negative reaction from the private landowners. Political pressure must have been rife and a year later as a counter reaction, the Irrigation Ordinance was promulgated.

This Ordinance was enacted in 1939 and was amended various times. The Irrigation Ordinance made an important distinction between “*surface water*” and “*underground water*”. This Ordinance defined ‘*surface water*’, as “*water derived from the roofs of buildings or the surface to roads or lands and stored in underground cisterns*” and ‘*underground water*’, as the “*water that is filtered through the soil and the underlying strata or flowed through natural fissures into the water table*¹⁹”.

This distinguished between cisterns and wells. A distinction which has served to subject extraction from cisterns and wells to different legal obligations, precisely because whilst the use of “*surface waters*” from cistern was being encouraged, the use of groundwater from wells was being subjected to regulation by the government to safeguard the resource from depletion.

¹⁹ Ordinance XII of 1938 as subsequently amended.

The Minister responsible for this Ordinance was the Minister responsible for agriculture NOT the Minister responsible for water supply. The Minister for agriculture had the power to declare “*irrigation areas*”²⁰. He did so “*to provide any area within Malta with a supply of water for the purpose of irrigation of the fields*”²¹ in that area”.

Once an area had been declared as an irrigation area, the Manager of the Department of Water Works had to oblige and provide adequate supplies of water to be made available **against payment**, for the irrigation of land, in the irrigation area, such that there was at least one outlet for taking water at some convenient point.

Again the ownership status of groundwater resources located in a tenement which the Civil Code attributes to the owner of that tenement²², is being called into question once this Ordinance established a legal obligation to pay for the water drawn for the irrigation of land.

These provisions addressed the regulation of water resources to control waste of groundwater and indirectly the quantity of the water abstracted. The onus of proof rested with the owner of the tenement and “*any person who obstructed the Manager or any person authorised under this Ordinance, to enter upon any land in execution of his powers, would have been be guilty of an offence*”. Similarly interference with, or damages to works connected with the irrigation water supply system, were punishable as an offence under this Ordinance.

As in the case of the Water Pumps Ordinance, the construction of wells in Irrigation Areas was brought under the direct control of the government which allowed it only against a permit – thereby further encroaching upon private ownership rights.

The status of private ownership of groundwater was subjected to further regulation under the Underground Water Ordinance of 1943 which repealed the Water Pumps Ordinance. The Ordinance attempted to control the extraction of ground water by requiring a licence for the importation, manufacture, buying, acquisition, sale, disposal, possession, control of water pumps²³. The reason for such a comprehensive approach with respect to water pumps, was to ensure effective control over extraction of groundwater, by not allowing any loopholes with respect to types of pumps in use. Thus the Ordinance ensured that a licencing system would provide the authorities with an inventory of all water pumps in Malta.

The reason for this further regulation is explained in the same Ordinance and it was prompted by the need of the government to “*maintain an adequate supply of underground water for use by the public or the irrigation of agricultural lands*”. Control was in the form of a licence which stipulated conditions for extraction of groundwater, the sinking of bores and shafts in search of underground water as well as maintenance of wells, in Water Controlled Areas.

²⁰ “*Irrigation Areas*” were designated in maps signed by the Minister for Agriculture and exhibited in the (Water Works Office) Police Stations where located.

²¹ “*Field*” – means a plot/plots of agricultural land “*held in lease*” for the purpose of cultivation.

²² Section 404 of Civil Code, Chapter 16 of the Laws of Malta.

²³ Chapter 114 of the Laws of Malta, Section 3 A.

Furthermore the provisions relating to compensation were restricted when compared to the Water Pumps Ordinance. In fact compensation for the prohibition of use of groundwater as regulated by this Ordinance, only applied to “*actual losses and damages directly attributable to such prohibition*”.

2.3 The Enabling Acts and the Subsidiary Legislation currently in force.

All these Ordinances were in turn repealed by the Water Services Corporation Act of 1991²⁴. When this Act was published in 1991, the Water Services Corporation assumed the role of both the regulator and the operator, but with the coming into force of the Malta Resources Authority Act of 2001²⁵, the use of the Water Services Corporation retained only the role of an operator. The regulator’s role was transferred by law to the Malta Resources Authority.

There is no reference to the ownership of groundwater under the Water Services Corporation Act or the Malta Resources Authority.

The Malta Resources Authority is therefore given very wide regulatory powers, over groundwater resources such that the Malta Resources Authority Act specifies that the Authority shall “*so however*” not be precluded “*from exercising any of its functions and powers for the purpose of ensuring that water is not wasted or misused and that no damage is caused to the aquifer or elsewhere*”. This qualification is in keeping Authority’s primary function “*to secure and regulate the conservation ... of water resources and sources of water supply*”.

These wider powers are in keeping with the trend of subjecting the unrestricted of use and enjoyment of groundwater by the private landowners, to the ever increasing regulation by the public authorities in order to conserve groundwater resources, so as to halt their depletion and ensure their good quality.

In 2001 the Environment Protection Act established statutory regulatory powers to protect the environment from pollution and degradation. The wide definition of the term ‘*environment*’ under the Environment Protection Act includes “*water*”²⁶. The duty to protect the environment and to manage natural resources in a sustainable manner is incumbent upon “*everyone together with the government*”²⁷. The Act continues to specify that it is the Government’s duty to protect the environment by taking certain guiding policy decisions based on a series of principles listed under this Article²⁸. These principles would ensure that the environment is protected, “*for the benefit of present and future generations*”. Top of the list of these principles, which the government is legally duty-bound to consider when formulating policy, declares that the government is to “*manage the environment, (and hence groundwater resources) in a sustainable manner by integrating and giving due consideration to environmental concerns in decisions on socio-economic and other policies*”²⁹.

²⁴ Cap 355 of the Laws of Malta.

²⁵ Chapter 423 of the Laws of Malta

²⁶ Chapter 465 of the Laws of Malta, Section 9.

²⁷ Ibid Section 3

²⁸ Ibid Section 5.

²⁹ Ibid.

The Act establishes a competent authority, which is the Malta Environment and Planning Authority³⁰ (MEPA) that is entrusted with implementing the Government's duties under this Act. The Authority has also an advisory role in assisting the Minister responsible for the Environment to formulate policies relating to the “*sustainable management of natural resources*”. This implies that under the Act, MEPA also has the responsibility to assist in the formulation of policies and their implementation, with respect to the sustainable use of ground water resources³¹.

Presently therefore, there are two main competent authorities entrusted with the conservation of groundwater. The Malta Resources Authority is responsible for groundwater as a resource in its entirety whilst MEPA is responsible for the conservation of groundwater that as part of the environment. These two public entities, are responsible for regulating any person, including owners of tenements where groundwater is located, to ensure that their right of use would not impair the status of this natural resources, both in terms of quality and quantity. This situation has continued to lead to the groundwater regulation by the public entities on behalf of the government, thereby encroaching upon the unhindered “*right of use*”, of groundwater by landowners as established in the Civil Code. The issue of compensation is not even mentioned in the enabling acts setting up these two authorities, namely the Environment Protection Act³² and the Malta Resources Authority Act³³.

The various sources of subsidiary legislation issued under the Environment Protection Act and the Malta Resources Authority, also aim at regulating use, abstraction and all operations which may directly or indirectly have an impact on the status of groundwater both in terms of depletion and in terms of pollution of the resource.

The status of “*Ownership*” of groundwater, therefore has not been changed by the enabling Acts and the subsidiary legislation presently regulating groundwater resources. There has been no repeal of the pertinent provisions of the Civil Code³⁴ but as above-mentioned this right of ownership, has become more and more qualified to meet the needs of the community at large. In other words it is evident that despite the fact that the provisions of the Civil Code are still in force, private ownership has been subjected to a stringent regulatory framework, by the various public entities, in order to safeguard the conservation of groundwater as a resource for the benefit of everybody.

3. Prospecting for Groundwater

The exclusive right of enjoyment of any groundwater located in one's tenement, subject to the rights of the owners of neighbouring tenements, established under the Civil Code, has been further qualified by subsequent, more specific legislation. This legislation has served to subject the exclusive right abovementioned, to regulation by

³⁰ LN 107/2002 Nomination of MEPA

³¹ Chapter 465 of the Laws of Malta Section 7 (1) (a).

³² Ibid

³³ Chapter 423 of the Laws of Malta.

³⁴ Vide supra Page 1.

the authorities that aims at safeguarding the status of this natural resource. Initially as we have already seen, regulation was rather sporadic and cosmetic, more recent legislation introduced to harmonize Maltese law with the *acquis communautaire* on the other hand, has adopted a holistic approach, which regulates the management of the resource as a whole.

Prospecting for groundwater has hardly in fact been addressed under Maltese law and its regulation has been rather superficial. The earliest form of regulation in this respect, was the establishment of Water Controlled Areas. Eventually under the Underground Water Ordinance, all of the Maltese Islands came to be classified as a Water Controlled Area. In this context, prospecting for groundwater was regulated rather strictly because the Minister responsible for water had the power to prohibit the use of wells and the sinking of wells in Water Controlled Areas, so as to “*maintain an adequate supply of underground water for use by the public or the irrigation of agricultured lands*”.

The term “*well*” as defined in the Underground Water Ordinance referred to, “*a well from which underground water is obtained or for the purpose of obtaining underground water*”. This restrictive definition excluded wells for the purpose of storing surface water, commonly called “*cisterns*”. The sinking or extension of wells for the purpose of obtaining underground water in Water Controlled Areas and even maintaining them in a workable condition, required a licence from the Water Board. The Underground Water Ordinance was the first legal instrument to prohibit the sinking of bores and shafts in search of groundwater. The Minister had the discretion to allow such activities by granting a special permit which could be revoked at any time.

The sinking of wells, boreholes, trenches for the purpose of obtaining underground water, in Irrigation Areas, also required a licence from another board, established under this same Ordinance. When in turn these Ordinances were repealed by the Water Services Corporation Act³⁵, the Water Services Corporation assumed the responsibilities of the Water Board and the Irrigation Board and one of its functions included the regulation of the “*acquisition*” of potable and non-potable water.

Subject to the provisions of the Water Services Corporation Act and to any requirement under any other law, the Corporation may, “*to the extent that it is so authorised to do, survey any land, to inspect any well and to cause the sinking of bores or other works for the purpose of ascertaining the nature of the subsoil or the presence, quality or quantity of underground water in it and to cause the sinking of shafts and the driving of subterranean galleries*”.

As the main operator prospecting for groundwater, the Corporation is in turn regulated by the Malta Resources Authority which is responsible for regulating, monitoring and keeping under review all practices, operations and activities relating to water, hence including its prospecting. Furthermore it is the Malta Resources Authority which is now responsible for issuing licences, permits and authorizations relating to any operation or activity concerning water³⁶.

³⁵ Chapter 355 of the Laws of Malta

³⁶ Chapter 423 of the Laws of Malta Section 4 (2).

There is no mention of “*prospecting for ground water*”, but the functions of Malta Resources Authority as listed in the Malta Resources Authority Act, include the “*securing*” and “*regulation*” of the “*acquisition and production*” of water³⁷, “*for all purposes including treatment, storage and use*”.

It is a criminal offence for any person to carry out any activity or operation with respect to water, unless such person is in possession of the required authorization of the Malta Resources Authority. The punishment for such an offence upon conviction is punishable upon prosecution to Lm50,000 (117,000 Euros) or to imprisonment for a term not exceeding two years or to both such fine and imprisonment.

The absence of subsidiary legislation under the Malta Resources Authority Act regulating prospecting for groundwater, has however created a situation where it is difficult to enforce this obligation because there is no legal source which supplements the enabling act, specifying in substantive regulatory terms, operations which aim at prospecting for groundwater.

More recent subsidiary legislation namely, the Protection of Groundwater Against Pollution caused by Dangerous Substances Regulations of 2002 which transpose the Groundwater Directive and the Water Policy Framework Regulations which transposes the Water Framework Directive as they stand, do not fill in this lacuna. The Regulations establishing a Framework of Action in the Field of Water Policy, which is more related to the regulation of prospecting for groundwater, adopt a holistic approach and require the Malta Resources Authority to take the necessary measures to protect, enhance and restore all bodies of ground water and to maintain, “*a good groundwater status*”. This calls for the immediate need for the Minister responsible for resources, to issue subsidiary legislation that will enable Malta Resources Authority to take these “*necessary measures*”. Subsidiary legislation regulating specifically the conditions required for allowing prospecting for groundwater, will have to respect the parameters for achieving a good quantitative and chemical status as specified in the schedules³⁸ to the Water Policy Framework Regulations.

In other words the regulation of prospecting for groundwater, is currently limited to requiring a licence for such operations. Operating without a licence or breaching conditions stipulated in the licences is tantamount to a criminal offence.

Apart from the inability to enforce this legal obligation as explained above, this situation is far from being comprehensive and transparent, as it does not establish clear legal obligations for the appropriate regulation of prospecting operations. Consequently, illegal prospecting for groundwater is rampant, with devastating negative results upon this invaluable, fragile resource.

³⁷ Which definition under the Act includes groundwater

³⁸ Tables 2.1.2 and 2.3.2 of the Water Framework Directive.

4. Protection of Groundwater from Depletion.

4.1 Regulation of Extraction and Use of Groundwater

In the early 20th century, it was already becoming evident that unhindered groundwater extraction and use, were resulting in the ever increasing depletion of this scarce and fragile resource on the Islands. This prompted the Government to promulgate in 1938 the Water Pumps Ordinance.

The use of water pumps for drawing water, *“particularly motor pumps”*, was seriously interfering with *“public water supplies in the district”*. Consequently the Governor saw fit to publish the Water Pumps Ordinance of 1938 to provide for the **registration of all water pumps**.

The Governor also established the Water Board, that had the power to declare *“Water Controlled Areas”* and to **prohibit or restrict the use of water pumps**. No pumps without a licence could be used in a *“Water Controlled Area”*. Compensation to be paid under this Ordinance, was limited to expenses incurred for the imposition of conditions.

The Underground Water Ordinance of 1943 as subsequently amended, was enacted to repeal and replace the 1939 Water Pumps Ordinance and probably also as a reaction to the Irrigation Ordinance which gave the Minister of Agriculture significant powers, to allow the extraction of groundwater for the purposes of irrigation against the payment of a fee.

The Underground Water Ordinance defines the term *“well”* as a *“any surface made in the ground, ... from which underground water is obtained or for the purpose of obtaining ground water”*³⁹.

The definition of *“water pump”* referred to any *“mechanical device for the purpose of raising, boosting, arculating and/or filtering water from any source or place whatsoever which is listed in the Schedule”*. Therefore the Ordinance targeted not only water pumps used for extraction of ground water. It improved upon the definition of the 1938 Water Pumps Ordinance, which was limited to mechanical devices for the purpose of raising water from a well. In turn, the term *“well”* was restricted by the way the latter was defined.

The Underground Water Ordinance like the Water Pump Ordinance also enabled the Minister responsible for water supply, to declare by order, *“that any area defined in such order shall be a water controlled area”*. The Minister had the power to prohibit use of wells and pumps and the sinking of wells for the purpose of, *“maintaining an adequate supply of underground water for use by the public or the irrigation of agricultural lands”*. A licence from the Water Board was required for any person, who sought to sink or extend a well in a Water Controlled Area. Similarly, a licence

³⁹ *“A well from which underground water is obtained or for the purpose of obtaining underground water”*.

was also required to install or add to a water pump, for drawing water from a well in a Water Controlled Area and even to maintain such a well in workable condition.

The Underground Water Ordinance also introduced the prohibition of sinking bores and shafts in search of underground water, allowing it only if this is done by a special permit issued at the discretion of the Minister responsible for the water supply, who could revoke it at any time.

Under this Ordinance the Courts could also order the total or partial blocking up of wells or the dismantling at the offender's expense, of the water pump by means of which the offence was committed. Under the authority of the Minister responsible for water supply, the manager of the Water Works Department had the right under the Ordinance, to sink shafts or bores and drive galleries anywhere through the lands of any person as may seem to him best suited for the purpose.

The manager had the power to enter, survey and inspect any land and any well, in order to maintain or improve the water supply of Malta and the hindrance or obstruction or tampering with any works executed by the Manager above mentioned, has tantamount to an offence, under the Ordinance.

A licence from the Board established under this Ordinance, was required for the sinking of wells, bore holes or trenches in irrigation areas, for the purpose of obtaining underground water, but not for cisterns for the purpose of conserving surface water. This led to two different authorities entrusted with the power of issuing licences for the extraction of ground water. The Board constituted under the Irrigation Ordinance issued licences for the extraction of ground water in, "*Irrigation Areas*", whilst the Board constituted under the Groundwater Ordinance was responsible for issuing licences for the extraction of groundwater in, "*Water Conservation Areas*".

The Water Services Corporation Act⁴⁰ repealed the Underground Water Ordinance and the Irrigation Ordinance. The Water Services Corporation Act as an enabling act, had various provisions which enabled the Minister responsible for water to issue regulations to control extraction of groundwater. These regulatory powers under the Water Services Corporation Act were transferred to Malta Resources Authority Act. Unfortunately however no specific subsidiary legislation regulating extraction has been issued as yet, under these two Acts and the enabling provisions themselves, in the absence of such subsidiary legislation which establish substantive legal obligations, do not have the power to render extraction illegal before a court of law. Administrative practices which were carried out under the repealed Ordinances, persisted for sometime, but without a legal backing neither the Water Services Corporation, nor later on the Malta Resources Authority can take the necessary legal steps against the "*offenders*", precisely because this lacuna prevents the courts from enforcing illegal abstraction.

The Malta Resources Authority Act bestows regulatory powers upon the Malta Resources Authority to "*regulate*" the "*acquisition*" of water for "*use*"⁴¹. The Malta

⁴⁰ Chapter 355 of the Laws of Malta.

⁴¹ Chapter 423 Section 4 (2) (6)

Resources Authority requires that for any person to carry out any such activity he/she must be in possession of a licence, permit or other authorization of the Authority⁴².

The Act specifies that a licence is not required with respect to any cistern/well in any dwelling house required to be instructed under any law⁴³. The qualification to this exception, however, is very telling and declares that the Authority shall “*sohowever*” not be precluded “*from exercising any of its functions and powers for the purpose of ensuring that water is not wasted or misused and that no damage is caused to the aquifer or elsewhere*”. This qualification is in keeping Authority’s primary function “*to secure and regulate the conservation ... of water resources and sources of water supply*”.

MEPA has no direct remit to control extraction *per se* but the Minister of the Environment may prescribe measures to control, prevent, manage or reduce pollution and degradation of the environment; as well as prevent, control, reduce remedy or otherwise manage situations which may lead to environmental emergencies and to prevent, control, reduce, remedy or otherwise manage any adverse effects on the environment resulting therefrom⁴⁴. Furthermore when abstraction of groundwater exceeds an annual volume of 10 million cubic metres, the operator is required by law, under the Regulations on Environment Impact Assessments to carry out an Environment Planning Statement to assess any damages to the environment that may result from such abstraction and either prevent it or take the necessary remedial measures to rectify the harm.

A fundamental step in the right direction which addresses regulation of abstraction of groundwater in a holistic measure was the transposition of the Water Framework Directive as part of the process of harmonizing Maltese legislation with the *acquis communautaire*.

The Water Policy Framework Regulations⁴⁵ issued under the Environment Protection Act and the Malta Resources Authority Act, adopt a holistic approach with respect to the whole field of water management. These regulations apportion responsibilities between two competent authorities, the Malta Resources Authority is the competent authority for “*inland waters*” whilst MEPA is the competent authority for “*coastal waters*”. The definition of “*inland water*” includes all ground water on the landward side of the baseline from which the breadth of the territorial sea is measured. Furthermore these regulations include as “*groundwater*” bodies of groundwater which occur outside the landmass up till the extent of twelve nautical miles from the baselines i.e. the territorial sea.

⁴² Ibid

⁴³ Chapter 423 of the Laws of Malta. Under Sub Paragraph 4. This distinction referred to supra ____ exempts use of water from cisterns from regulation because as opposed to wells cisterns collect surface water and not groundwater.

⁴⁴ Chapter 465 of the Laws of Malta Section 4

⁴⁵ These regulations which have been published for public consultation and will be published as law by 1st May, 2004 transpose the Water Framework Directive 2006/60/EC.

These regulations speak of Malta Resources Authority's responsibilities to "*prevent the deterioration of the status of all the bodies of groundwater*". In this context the Malta Resources Authority is obliged to take the "*necessary measures*"⁴⁶:

- to protect, enhance and restore all bodies of groundwater.
- to ensure a balance between abstraction and recharge of ground water such that it achieves "*a good groundwater status*", that is the status achieved by a ground water body when both its quantitative and its chemical status are at least "*good*". This has to be done by the end of November 2015, in accordance with the provisions laid down in Annex V of the draft regulations.
- This deadline may be extended "*for the purposes of phased achievement of the objectives for bodies of water*" and "*provided that no further deterioration occurs in the status of the affected body*" of groundwater when the conditions listed in the regulations are met.

In each water catchment district, the Malta Resources Authority shall identify all bodies of groundwater used for the abstraction of water intended for human consumption. This is qualified as providing, "*more than ten metres cubed a day, as an average or serving more than fifty persons*". Bodies of groundwater intended for such future use, need also be identified.

In order to achieve the environmental objectives afore-mentioned, the Malta Resources Authority must establish a *programme of measures* for each water catchment district. Each programme shall include a number of "*basic measures*" and where necessary also "*supplementary measures*".

"*Basic measures*" are the minimum requirements required by the Water Framework Directive, to be compiled with and shall include

- measures to meet the requirements of these regulations relating to the abstraction of drinking water, including measures to safeguard water quality in order to reduce the level of purification treatment required for the production of drinking water;
- controls over the abstraction of groundwater, including a register or registers of water abstractions and a requirement of prior authorisation for abstraction. These controls shall be periodically reviewed and, where necessary, updated. The competent authority can exempt from these controls, abstractions which have no significant impact on water status;

These programmes of measures shall be established by the end of November 2009 and shall come in operation in November 2010. They shall be reviewed and "*if necessary updated by the end of November 2015 and every six years thereafter*". New measures which are introduced, shall be made operational within three years of their establishment.

⁴⁶ Art 4 (1) (b) (ii) of the draft regulations.

When it becomes apparent through monitoring and other data that environment objectives set under these regulations will not be met for a particular body of ground water, it is the Malta Resources Authority's duty as the competent authority, to investigate the causes for such a failure and to examine and review relevant permits and monitoring programmes.

The regulation of the extraction and use of groundwater within the context of the Regulations establishing a Framework of Action in the Field of Water Policy forms part of a more holistic management plan, which will be elaborated upon under heading 6 of this report.

This is a tremendous improvement over previous attempts to control the quantity of groundwater extracted to safeguard the resource from depletion, by registering water pumps and prohibiting or controlling extraction in water catchment areas. The latter measures which in themselves were useful in the absence of a legal framework which lacked a holistic approach, may in fact still be re-introduced as part of the various "*basic and supplementary measures*" the Malta Resources Authority needs to take, to meet the requirements of these regulations, to control the abstraction of groundwater in particular and to protect, enhance and restore all bodies of groundwater in general.

4.2 Declaration of Specially Protected Areas or Aquifers.

As already mentioned the Waterpumps Ordinance and the Underground Water Ordinance both established "*Water Controlled Areas*", within which abstraction of groundwater was either prohibited or restricted. The Water Policy Framework Regulations establish that in each water catchment district, the Malta Resources Authority shall identify all bodies of groundwater used for the abstraction of water intended for human consumption. This is qualified as providing "*more than ten metres cubed a day as an average or serving more than fifty persons*". Bodies of groundwater intended for such future use need also be identified.

By November 2004 the Malta Resources Authority, as the competent authority shall have to register all areas lying within each water catchment district, which have been designated as requiring special protection, under specified legislation, for the protection of groundwater.

It is perhaps necessary however to consider the definitions under these draft regulations which concern groundwater.

"*Groundwater*" is defined as "*all water below the surface of the ground, in the saturation zone and in direct contact with the ground or sub soil*". "*Body of groundwater*" means a distinct volume of groundwater "*within an aquifer*". In turn "*aquifer*" is defined as a sub surface layer or layers of rock or other geological strata of sufficient porosity and permeability to allow the flow or abstraction of "*significant quantities of groundwater*". The definition of "*river*" also may include groundwater, as it is defined as a body of "*inland water*" which "*all ground water on the landward side of the baseline from which the breadth of territorial sea is measured*". In other words these regulations include as "*groundwater*" bodies of groundwater which occur outside the landmass up till the territorial sea i.e. twelve nautical miles from the base lines.

One of the very first functions of the competent authority is to identify groundwater which does not follow a particular water catchment and assign it to the nearest or most appropriate water catchment district. The Malta Resources Authority shall ensure that there are appropriate administrative arrangements for the application of these regulations within each catchment district in Malta⁴⁷.

These definitions and the obligation to register all areas within each water catchment district are not enough. Subsidiary legislation must be published which identifies these areas on the basis of legal interpretation given in the definitions. Unless these areas are specifically declared in a legal instrument as designated areas which require special protection for safeguarding groundwater, the competent authority will not fulfill its mandate under the regulations to ensure that these identified bodies of ground water are afforded the necessary protection to avoid deterioration in their quality and quantity. In fact as the competent authority the Malta Resources Authority is required to take the “*necessary measures*”⁴⁸:

- to protect, enhance and restore all bodies of groundwater.
- to ensure a balance between abstraction and recharge of ground water such that it achieves “*a good groundwater status*” that is the status achieved by a ground water body when both its quantitative and its chemical status are at least “*good*” by the end of November 2015, in accordance with the provisions laid down in Annex V. This deadline may be extended “*for the purposes of phased achievement of the objectives for bodies of water*”.

and “*provided that no further deterioration occurs in the status of the affected body*” of groundwater.

4.3 Artificial Recharge of Aquifers

Recharge of aquifers has just started being subjected to regulation, with the publication of the 2002 Regulations on the Protection of Groundwater from Dangerous Substances and the 2004 Water Policy Framework Regulations. These draft regulations in fact include as a basic measure.

- Controls, including a requirement for prior authorization of artificial recharge or augmentation of groundwater bodies. The water used may be derived from any groundwater, provided that the use of the source does not compromise the achievement of the environmental objectives established for the source or the recharged or augmented body of groundwater. These controls shall be periodically reviewed and, where necessary, updated.

The “*basic measures*” are the minimum requirements the competent authority shall take with respect to the programme of measures, it is obliged to conclude for each water catchment district.

⁴⁷ Article 3 of the Water Policy Framework Regulations.

⁴⁸ Ibid, Art 4 (1) (b) (ii).

Under the 2002 Regulations regulating Groundwater from Dangerous Substances, the Malta Resources Authority may authorize discharges into the aquifer due to re-injection of water used for geothermal purposes, after it carries out “*prior investigations*”. Artificial recharges, under these regulations may only be granted “*if there is no risk of polluting the ground water*”.

Artificial recharge of aquifers is also subject to an Environment Planning Statement under the Environment Impact Assessment Regulations⁴⁹, if such a recharge into the aquifer is annually equivalent to or exceeds a volume of 10 million cubic metres⁵⁰.

Furthermore artificial recharge of aquifers by the Malta Resources Authority or any public entity, will be probably subjected to a Strategic Environment Assessment because water management plans and programmes fall within the scope of draft regulations transposing the EU Directive 2001/42/EC on the Assessment of the Effects of Certain Plans and Programmes on the Environment⁵¹.

5. Regulating the Well-Drilling Trade

If the legal regulation relating to prospecting for groundwater is lacking, the regulation of the well-drilling trade is completely overlooked. There are some legal provisions which make a remote reference to the regulation of such operations. For instance the Water Services Corporation Act⁵² states that:

Subject to the provisions of the Water Services Corporation Act and to any requirement under any other law, the Corporation may “*provide technical assistance to other persons desirous of sinking wells, driving galleries, constructing conducts or otherwise to improve their water supply*”⁵³.

The laws referred to in these provisions under the Water Services Act, which would be in a position to regulate the well-drilling trade, may be in the form of subsidiary legislation under the Malta Resources Act. The Minister responsible for resources may issue such regulations and entrust the Malta Resources Authority as the competent authority, with “*regulating, monitoring and keeping under review, all practices, operations, activities relating to water*”⁵⁴. Although as we have seen a licence from Malta Resources Authority is required to sink or drill a well, borehole or shaft, these are no substantive legal provisions which regulate such a trade. This situation is rather dangerous given the available technology that is on the market nowadays. It is indeed strange to understand why the authorities have in the past worked to compile an inventory of water pumps in use, by requiring their registration, but have never thought of registering well-drilling apparatus.

The more recent subsidiary legislation, such as the 2004 Draft Regulation establishing a Framework for Action in the Field of Water Policy require the immediate regulation

⁴⁹ LN 204 of 2001.

⁵⁰ Ibid, Schedule 1, Section 5.4.

⁵¹ Infra Part One Chapter 9.

⁵² Chapter 355 of the Laws of Malta.

⁵³ Ibid Section 3.

⁵⁴ Chapter 423 of the Laws of Malta Section 4

of well-drilling operations to ensure that the regulation of extraction and use of groundwater is successfully complied with. This is because these regulations aim at securing a “good groundwater status”. By November 2006, the Malta Resources Authority as the Competent Authority, shall monitor the chemical and quantitative status of groundwater. The current situation relating to the well-drilling trade, therefore, cannot remain unregulated if the latter draft regulations are implemented in a comprehensive manner.

6. Protection of Groundwater from Pollution

The earliest legal sources still in force today which regulate pollution are the provisions of the Code of Police Laws⁵⁵.

*“Every person shall avoid causing, through his negligence, any rubbish, mud, or other noxious or offensive matter to enter into any fountain, aqueduct, or other like place destined for the preservation of public water, or any putrid water of other offensive matter to run into any such fountain, aqueduct or other place from any cesspool, conduit or other Place; or any other things whereby public water shall be rendered foul unwholesome”*⁵⁶.

*“No person shall throw or negligently allow to flow any rubbish, or any polluted or dirty water or any other offensive matter into the wastewater pit of any public stand-pipe”*⁵⁷.

The promulgation of the Water Pumps Ordinance, the Groundwater Ordinance and the Irrigation Ordinance attempted to control the **depletion** of the resource of limiting or at times prohibiting extraction of groundwater, but there were no legal provisions which aimed at safeguarding the **qualitative** aspect of the resource.

In other words until the coming into force of the Malta Resources Authority Act and the Environment Protection Act, there were no legal sources which regulated discharges and emission into the environment that could pollute groundwater. The 1991 Water Services Corporation Act, listed as one of the functions of the Water Services Corporation to “conserve” water resources, but this role of the Water Services Corporation should be interpreted more from a commercial rather than an environmental perspective. At any rate this responsibility to “secure” and “regulate”, the “conservation” of groundwater, for all purposes relating to its use, was transferred to the Malta Resources Authority Act, which such responsibilities for water in general, not just groundwater.

In this context however, it is the Environment Protection Act however, which is the primary legal source which has filled in this legal lacuna. The Minister of the Environment has wide enabling powers to issue regulations, which may be used to affect the management and use of groundwater resources. The following enabling

⁵⁵ Chapter 10 of the Laws of Malta.

⁵⁶ Ibid, Section (1) 151.

⁵⁷ Ibid (1).

provisions which may be used are:

- To establish co-ordinate and enforce environment quality control systems and make provisions for the carrying out of assessments of environmental risks of both new and existing establishments;
- To set objectives, issue directives and establish codes of practice, all in relation to the environment, to the reduction, reuse, recovery, treatment, storage and disposal of materials as may be prescribed, to all human activity which effect the environment and to ensure sustainable development;

With regards to integrated pollution and control:

- To establish systems which ensure such prevention and control;
 - Prescribe measures to control, prevent, manage or reduce pollution and degradation of the environment;
 - Control the keeping, management, trading in or use of substances and other activities, which may cause or facilitate pollution;
 - Set standards including maximum of permitted levels in quantitative or qualitative terms, of discharge and emissions into the environment of materials, substance or energy with regard to the use of any technology, equipment, matter, substance, method or procedure in relation thereto;
 - Establish methodologies to be used in the monitoring of discharge emission of substances and, or energy into the environment and to regulate the use of information gathered during such monitoring;
 - Prevent, control, reduce remedy or otherwise manage situation which may lead to environmental emergencies and to prevent, control, reduce, remedy or otherwise manage any adverse effects on the environment resulting therefrom.

By virtue of these wide enabling provisions and the enabling provisions of the Malta Resources Authority Act regulations have been issued to eliminate, prevent, control pollution of groundwater both from point sources as well as diffuse sources.

6.1 Pollution of Groundwater from Point Sources

6.1.1 The Regulations for Protection of Groundwater against Pollution caused by Dangerous Substances 2002.

It must be noted that these regulations tackle also pollution of ground water from diffuse sources as they regulate “*indirect discharges*”. In order to avoid a fragmented legal assessment of these regulations however, I have chosen to tackle both the provisions relating to “*direct discharges*” i.e. point source pollution and the provisions relating to “*indirect discharges*” i.e. diffuse source pollution, under this

heading.

These regulations were issued under the Malta Resources Authority Act, 2000. They are preventive in nature because the regulations aim at the prevention of groundwater pollution from certain “*dangerous substances*”. These dangerous substances are listed in Schedules I and II to the regulations. These regulations also aim at providing for remedial measures, because or is also their objectives, “*as far as possible to check or eliminate the consequences of pollution which have already occurred*”⁵⁸.

Under these regulations, groundwater is defined as “*all water, which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil*”. This definition which is different from the definition that used to define groundwater in the Irrigation Ordinance is lifted from the Directive these regulations transpose.

The regulations also specify what is meant by “*pollution*” for the purpose of these regulations. Pollution of groundwater occurs whenever there are any “*anthropogenic direct discharges*” and “*indirect discharges*”. The introduction into groundwater of substances in lists I and II, without percolation through the ground or subsoil, is defined as a “*direct discharge*”, whilst if these same substances are introduced into groundwater after percolation through the ground or subsoil this would be tantamount to an “*indirect discharge*”. Furthermore the definition of “*pollution*” under these regulations goes on to say that pollution results if these anthropogenic direct and indirect discharges into groundwater are such as to “*endanger human health or water supplies, harm living resources and the aquatic ecosystem or interfere with other legitimate uses of water*”⁵⁹.

The definition of pollution is very wide as it does not only refer to indirect/direct discharges of “*substances*” but also of “*energy*” and it does not qualify the “*substances*” as being those listed in schedules I and II. This qualification occurs only in the definition of “*direct and indirect discharges*”, which again is limited to include only substances and not energy as well. In other words the definition of pollution encompasses not only the substances listed in Schedules I or II, but all those substances, which cause the negative repercussions, mentioned in the same definition. This definition is wider than that of the Directive, the legislator in Malta, seems to have intended to go beyond the substances mentioned in the schedules and adopted a wider approach to safeguard groundwater from pollution.

The regulations do not apply to discharges of substances listed in schedule I and II if these emanate from, “*domestic effluents from isolated dwellings not corrected to a sewerage system*”, if these dwellings are situated, “*outside areas protected for abstraction of water for human consumption*”⁶⁰.

These, “*areas protected for abstraction of water for human consumption*”, are no longer protected by law but they are the same “*water controlled areas*” established under the Water Pumps Ordinance and later on the Underground Water Ordinance which were both repealed in 1991 when the Water Services Act came into force. The

⁵⁸ LN 203/2002 Article 1 (3).

⁵⁹ Vide Article 2 LN 203/2002.

⁶⁰ LN203/2002 Article 3 (a).

Regulations on the establishment of a Framework of Action in the Field of Water Policy will define, “*Water Catchment Districts*”, which will be the same “*protected areas*” herein mentioned.

Also exempted are discharges, which contain substances, listed in Schedules I or II, which are in such small quantities and concentration that they would, “*obviate any present or future danger of deterioration in the quality of the receiving groundwater*”⁶¹. It would be more appropriate, if these regulations were to have a set of thresholds, which would determine when quantities and concentrations are likely to cause deterioration in the quality of ground water. As it is recorded here, the law is weak and subject to conflicting interpretation.

The regulations prohibit the “*direct discharges of substances in list P*”.

The Malta Resources Authority as the competent authority, shall subject to, “*prior investigation any person who for the purpose of disposing of these substances the discharge of which is prohibited as above mentioned, disposes of or tips them in a manner which might lead to indirect discharge*”. The Malta Resources Authority shall either prohibit any such disposal or tipping or grant its authorization once it ensures that all the necessary technical precautions “*to prevent such discharge are observed*”⁶².

The Malta Resources Authority therefore is legally bound to adopt a preventive approach and cannot grant its authorization if such discharge cannot be prevented. Similarly the Malta Resources Authority is empowered to, “*take all appropriate measures it deems necessary, to prevent any indirect discharge of substances in list P*”, which may occur due to other activities, “*on or in the ground*”⁶³. The Malta Resources Authority may still authorize in such cases, the discharge of substances in list I, if “*prior investigations*” reveal that these substances will be discharged into groundwater considered to be, “*permanently unsuitable for other uses, especially domestic or agricultural*” purposes, but to do so, it must ensure that, “*their presence does not impede exploitation of groundwater resources*”, and that, “*all technical precautions have been taken to ensure that these substances cannot reach other aquatic systems or harm other ecosystems*”⁶⁴.

The Malta Resources Authority may also authorize “*after prior investigation*” discharges, due to re-injection into the same aquifer of water used for geothermal purposes, water pumped out of mines and quarries or water pumped out for civil engineering works.

Also subject to “*prior investigation*” are:

- The direct discharge of substances in list II,
- The disposal or tipping for the purpose of disposal of said substances, which disposal might lead to indirect discharge.

⁶¹ Ibid Article 3 (b).

⁶² LN203/2002 Article 4 (2) (b).

⁶³ Ibid.

⁶⁴ Ibid.

The Malta Resources Authority may subsequently decide to grant an authorization for these types of discharges but, “*all technical precautions for preventing groundwater pollution by these substances*”, have to be observed.

The Malta Resources Authority shall take all the measures it deems to be appropriately necessary, “*to limit all indirect discharges of substances in list II*”, which result from any other “*activities on or in the ground*”. The regulations provide for a “*special authorization*” from the Malta Resources Authority “*on a case-by-case basis*”. With respect to “*artificial recharges for the purpose of groundwater management*”, such a special authorization may only be granted, “*if there is no risk of polluting the ground water*”. As a result of the wide definition given to “*pollution*” under these regulations, such risk would arise despite the absence of substances listed in Schedules I and II.

The regulations continue to specify that the “*prior investigations*”, referred to as a precondition before authorizations may be issued by the Malta Resources Authority “*shall include examination of the hydrogeological conditions of the area concerned, the possible purifying powers of the soil and subsoil and the risk of pollution and alteration of the quality of the groundwater from the discharge and shall establish whether the discharge of substances into groundwater is a satisfactory solution from the point of view of the environment*”.

Apart from “*prior investigations*”, the authorizations above-mentioned shall not be issued by the Malta Resources Authority before the groundwater “*especially its quality*”, undergoes the “*requisite surveillance*”. The regulations do not specify in legal terms what is meant by “*requisite surveillance*”⁶⁵.

In the case of authorized “*direct discharges*”⁶⁶ and “*authorized waste water disposal which inevitably causes indirect discharge*”⁶⁷, the Malta Resources Authority shall specify in its authorization:

- the place of discharge,
- the method of discharge,
- essential precautions, particular attention being paid to the nature and concentration of the substances present in the effluents, the characteristics of the receiving environment and the proximity of water catchment areas, in particular those for drinking, thermal and mineral water,
- the maximum quantity of a substance permissible in an effluent during one or more specified periods of time and the appropriate requirements as to the concentration of these substances,
- the arrangements enabling effluents discharged into ground water to be monitored;

⁶⁵ LN203/2002 Article 8.

⁶⁶ Authorised under LN 203/2002 Article 4 (2) (3) and 5.

⁶⁷ Authorized under LN 203/2002 Article 5.

- where necessary, the measures for monitoring groundwater, and in particular its quality.

When the Malta Resources Authority grants its authorization for the disposal of substances by disposal or tipping which in turn might lead to an indirect discharge⁶⁸, the Authority must specify:

- the place where such disposal or tipping is done,
- the methods of disposal or tipping used,
- essential precautions, particular attention being paid to the nature and concentration of the substances present in the matter to be tipped or disposed of, the characteristics of the receiving environment and the proximity of water catchment areas, in particular those for drinking, thermal and mineral water,
- the maximum quantity permissible, during one or more specified periods of time, of the matter containing substances in lists I or II and where possible, of those substances themselves, to be tipped or disposed of and the appropriate requirements as to the concentration of those substances,
- in the cases referred to in article 4 (1) and article 5 (1) of these regulations, the technical precautions to be implemented to prevent any discharge into groundwater of substances in list I and any pollution of such water by substances in list II,
- If necessary, the measures for monitoring the groundwater, and in particular its quality.

The duration of authorizations granted, are at the Malta Resources Authority's discretion. In fact authorizations can only be granted for a limited period and shall be "*reviewed, amended or withdrawn*"⁶⁹. It is also incumbent on the Malta Resources Authority to monitor compliance with the conditions stipulated in the authorizations and the effects of the discharges so authorized on the groundwater⁷⁰. Furthermore the regulations oblige the Malta Resources Authority to refuse the granting of an authorization, required under these same regulations, to any person requesting it if he himself states that he is unable to comply with the conditions imposed in the said authorization, "*or if this situation is evident to the competent authority*"⁷¹. If the authorization has already been granted and the person so authorized is not complying with the conditions laid down therein, the Malta Resources Authority is obliged under these regulations to "*withdraw the authorization*"⁷².

⁶⁸ As authorized under Articles 4 or 5 of LN 203/2002.

⁶⁹ LN 203/2002 Article 11.

⁷⁰ Ibid Article 13.

⁷¹ LN 203/2002 Article 12 (1).

⁷² Ibid Article 12 (2).

The Authority may also stipulate a period of expiry, for discharges of substances in lists I and II, which were already occurring when the regulations come into force.

6.1.2 The 2004 Water Policy Framework Regulations.

Due to their comprehensive approach these regulations also regulate pollution from diffuse sources but as explained above, I have preferred to legally assess them, holistically under this part relating to pollution from point sources.

The purpose of these regulations is to “*establish a framework of Action*” for the protection of “*inland surface waters*”, “*transitional waters*”, “*coastal waters*” and “*ground water*”.

These regulations attempt to adopt a holistic approach with respect to the whole field of water management. In our case, the provisions relating to ground water only, will be assessed.

There are a number of definitions under these regulations, which concern groundwater and its status. “*Groundwater*” is defined as, “*all water below the surface of the ground, in the saturation zone and in direct contact with the ground or sub soil*”. “*Body of groundwater*”, means a distinct volume of groundwater “*within an aquifer*”. In turn “*aquifer*” is defined as a sub surface layer or layers of rock or other geological strata of sufficient porosity and permeability to allow the flow or abstraction of, “*significant quantities of groundwater*”. The definition of “*river*” also may include groundwater, as it is defined as a body of “*inland water*” which may flow underground for part of its course, whilst the definition of “*inland water*” includes, “*all ground water on the landward side of the baseline from which the breadth of territorial sea is measured*”. In other words these regulations include as “*groundwater*”, bodies of groundwater, which occur outside the landmass up till the territorial sea i.e. “*twelve nautical miles from the base lines; from which the breadth of the territorial sea is measured*”.

The competent authority for “*inland waters*” which includes groundwater wherever it occurs, is the Malta Resources Authority. One of the very first functions of the competent authority is to identify groundwater, which does not follow a particular water catchment, and assign it to the nearest or most appropriate water catchment district. The Malta Resources Authority shall ensure that there are appropriate administrative arrangements for the application of these regulations within each catchment district in Malta⁷³.

As the regulations define the Malta Resources Authority as the “*competent authority*”, in so far as “*inland water is concerned*”⁷⁴, it is the Malta Resources Authority’s competence to “*take the necessary measures*”, to ensure that the environmental objectives⁷⁵ established under the Regulation are met and to coordinate, “*all programmes of measures for the whole of the catchment district*”⁷⁶.

⁷³ Article 3.

⁷⁴ Exception inland waters found in nature reserves listed in the Schedule to LN 143/93.

⁷⁵ The “*environmental objectives for groundwater*” are listed in Art 4 (1)(b).

⁷⁶ Article 3 (3).

Malta Resources Authority is to take the necessary measures to prevent and limit the input of pollutants, into ground water and to prevent the deterioration of the status, of all the bodies of groundwater⁷⁷.

This implies that the Malta Resources Authority has to establish thresholds with respect to all types of emissions and discharges into the environment, which in some manner pollute groundwater. “Pollutants” are defined in the regulations as, “*any substance liable to cause pollution particularly those listed in Annex VIII to the regulations*”. “Pollution” in turn, is defined as, “*the direct or indirect introduction, as a result of human activity, of substances or heat into the air, water or land which may be harmful to human health or the quality of aquatic ecosystems, which result in damage to material property, or which impair or interfere with amenities and other legitimate uses of the environment*”. The emissions and discharges concerned, therefore are those which affect groundwater whether directly or indirectly, irrespective from where they originate.

Furthermore the Malta Resources Authority is legally bound to **prevent** the, “*deterioration of the status of all bodies of ground water*”. The regulations however specify⁷⁸ that:

“Temporary deterioration in the status of bodies of water shall not be in breach of the requirements of these regulations if this is the result of circumstances of natural cause or force major which are exceptional or could not reasonably have been foreseen, in particular extreme floods and prolonged droughts, or the result of circumstance due to accidents which could not reasonably have been foreseen, when all of the following conditions have been met”.

Apart from this, the regulations also specify that the rules laid down in these regulations shall not be deemed to have been breached, if “*alterations to the level of bodies of groundwater shall lead to a failure in the achievement of a good groundwater status*”. A good ground water status is defined in the regulations as, “*the status achieved by a groundwater body when both its quantitative status and its chemical status are at least good*”.

The Malta Resources Authority is obliged to take the “*necessary measures*”⁷⁹:

- to protect, enhance and restore all bodies of groundwater.
- to ensure a balance between abstraction and recharge of ground water such that it achieves “*a good groundwater status*”, that is the status achieved by a ground water body when both its quantitative and its chemical status are at least “*good*” by the end of November 2015, in accordance with the provisions laid down in Annex V. This deadline may be extended, “*for the purposes of phased achievement of the objectives for bodies of water*” and “*provided that no further deterioration occurs in the status of the affected body*” of groundwater when the conditions listed in Article 4 are met.

⁷⁷ Art 4 (1) (b) (i).

⁷⁸ Act 4 (6).

⁷⁹ Art 4 (1) (b) (ii).

The Malta Resources Authority “shall implement”, the “measures necessary” to reverse any significant and sustained, upward trend in the concentration of any pollutant derived from anthropogenic activities so as to reduce pollution of ground water “progressively”⁸⁰.

The Malta Resources Authority may aim to achieve less stringent environmental objectives for bodies of ground water than those listed above, when they are so affected by human activity⁸¹. The competent authority shall ensure that for each water catchment district, it undertakes:

- an analysis of its characteristics,
- a review of the impact of human activity on the status of groundwater found within the said district, and
- an economic analysis of water use

The said analyses and reviews must be carried out in accordance to the technical specifications set out in Annexes II and III, and must be completed by the end of November 2004. The analyses and reviews⁸² shall be reviewed, and if necessary updated by the end of November 2013 and every six years thereafter and when the natural condition of the body of groundwater is such that the achievement of these environmental objectives would not be feasible or is disproportionately expensive.

There are however four important qualifications to the above:

1. The environmental and socio economic needs, served by such human activity cannot be achieved by other means, if these means are a, “*significantly better environmental option not entailing disproportionate costs*”.
2. Furthermore the Malta Resources Authority must ensure for groundwater, the least possible changes to good groundwater status, given that the impact that could not *reasonably* have been avoided, due to the nature of the human activity or pollution.
3. The Malta Resources Authority must also ensure that the status of the body of groundwater is not further deteriorated.
4. Lastly, the Malta Resources Authority must list the less stringent environmental objectives in the water catchment management plan⁸³, together with the reasons for adopting these less stringent environmental objectives. These objectives must be reviewed every six years.

As a blanket provision the regulations oblige the Malta Resources Authority to ensure that in applying all these obligations, it has to ensure that the application does not “*permanently exclude or compromise the achievement of the objectives of these*

⁸⁰ Art. 4 (1) (b) (iii).

⁸¹ In accordance with Art 5 (1) of the regulations.

⁸² Mentioned under sub-regulation (1).

⁸³ Required under Article 12.

regulations in other bodies of water within the same water catchment district and is consistent with the implementation of other environmental regulations”.

In each water catchment district, the Malta Resources Authority shall identify all bodies of groundwater used for the abstraction of water intended for human consumption. This is qualified as providing, “*more than ten metres cubed a day as an average or serving more than fifty persons*”. Bodies of groundwater intended for such future use need also be identified.

It is the duty of the competent authority, to ensure that bodies of groundwater that are identified, are afforded the necessary protection to avoid deterioration in their quality, so as to reduce the level of purification treatment required in the production of drinking water. In so doing the Malta Resources Authority may establish safeguard zones for these bodies of groundwater.

The planned steps, which the competent authority intends to take in this regard, are to be reported in the *water catchment management plans*.

In order to achieve the environmental objectives afore-mentioned, the Malta Resources Authority must establish a *programme of measures*, for each water catchment district. In so doing the Malta Resources Authority is to take into consideration the analysis of the characteristics of the water catchment district, the review of the environmental impact of human activity and the economic analysis of water use, also mentioned above. Each programme shall include a number of “*basic measures*” and where necessary also “*supplementary measures*”.

“*Basic measures*” are the minimum requirements to be compiled with and shall consist of:

- Measures required to implement legislation aimed at the protection of water;
- Measures deemed appropriate for the purposes of recovery of cost of water services;
- Measures to promote an efficient and sustainable water use in order to avoid compromising the achievement of the environmental objectives specified in these regulations;
- Measures to meet the requirements of these regulations relating to the abstraction of drinking water, including measures to safeguard water quality in order to reduce the level of purification treatment required for the production of drinking water;
- Controls over the abstraction of groundwater, including a register or registers of water abstractions and a requirement of prior authorization for abstraction. These controls shall be periodically reviewed and, where necessary, updated. The competent authority can exempt from these controls, abstractions which have no significant impact on water status;

- Controls, including a requirement for prior authorization of artificial recharge or augmentation of groundwater bodies. The water used may be derived from any groundwater, provided that the use of the source does not compromise the achievement of the environmental objectives established for the source or the recharged or augmented body of groundwater. These controls shall be periodically reviewed and, where necessary, updated;
- For point source discharges liable to cause pollution, a requirement for prior regulation, such as a prohibition on the entry of pollutants into water, or for prior authorization, or registration based on general binding rules, laying down emission controls for the pollutants concerned. These controls shall be periodically reviewed and, where necessary, updated;
- For any other significant adverse impacts on the status of water identified under the analysis carried out in accordance with these regulations;
- A prohibition of direct discharges of pollutants into groundwater provided that the competent authority may authorize re-injection into the same aquifer of water used for geothermal purposes. It may also authorize, specifying the conditions for:
 - (i) Injection of water containing substances resulting from the operations for exploration and extraction of hydrocarbons or mining activities, and injection of water for technical reasons, into geological formations from which hydrocarbons or other substances have been extracted or into geological formations which for natural reasons are permanently unsuitable for other purposes. Such injections shall not contain substances other than those resulting from the above operations,
 - (ii) re-injection of pumped groundwater from mines and quarries or associated with the construction or maintenance of civil engineering works,
 - (iii) injection of natural gas or liquefied petroleum gas (LPG) for storage purposes into geological formations which for natural reasons are permanently unsuitable for other purposes,
 - (iv) injection of natural gas or liquefied petroleum gas (LPG) for storage purposes into other geological formations where there is an overriding need for security of gas supply, and where the injection is such as to prevent any present or future danger of deterioration in the quality of any receiving groundwater,
 - (v) Construction, civil engineering and building works and similar activities on, or in the ground, which come into contact with groundwater. For these purposes, the competent authority may determine that such activities are to be treated as having been authorized provided that they are conducted in accordance with general binding rules developed by the same in respect of such activities, and
 - (vi) Discharges of small quantities of substances for scientific purposes for characterization, protection or redemption of water bodies limited to the amount strictly necessary for the purposes concerned,

Provided such discharges do not compromise the achievement of the environmental objectives established for that body of groundwater.

(l) Any measure required to prevent significant losses of pollutants from technical installations, and to prevent and/or to reduce the impact of accidental pollution incidents for example as a result of floods, including through systems to detect or give warning of such events including, in the case of accidents which could not reasonably have been foreseen, all appropriate measures to reduce the risk to aquatic ecosystems.

“*Supplementary*” measures are those measures designed and implemented in addition to the basic measures, with the aim of achieving the environmental objectives established under these regulations. Part B of Annex VI contains a non-exclusive list of such measures. The competent authority may also adopt further supplementary measures in order to provide for additional protection or improvement of the water covered by these regulations, including the implementation of the relevant international agreements.

These programmes of measures shall be established by the end of November 2009 and shall come in operation in November 2010. They shall be reviewed and “*if necessary updated by the end of November 2015 and every six years thereafter*”. New measures, which are introduced, shall be made operational within three years of their establishment.

When it becomes apparent through monitoring and other data that environment objectives set under these regulations will not be met, for a particular body of ground water, it is the Malta Resources Authority’s duty as the competent authority, to investigate the causes for such a failure and to examine and review relevant permits and monitoring programmes.

The competent authority must ensure that a water catchment plan, which includes details listed in Annex VII to these regulations, is produced for each water catchment district and that it is published by end of November 2009. These plans may be supplemented by more detailed programmes and management plans.

These management plans as with the programmes of measures above mentioned shall be reviewed and updated by the end of November 2015 and every six years thereafter.

6.2 Pollution from Diffuse Sources

As explained above, the Regulations on the Protection of Groundwater from Certain Dangerous Substances, regulate also pollution from diffuse sources when they addresses indirect discharges. Similarly the regulatory measures under the Water Policy Framework Regulations, aim at controlling pollution both from point and diffuse sources. In fact when addressing the “*basic measures*”, as minimum requirements which are to be complied with, the regulations establish that for diffuse sources liable to cause pollution, measures to prevent or control the input of pollutants are to be taken. Controls may take the form of a requirement for prior regulation, such a prohibition on the entry of pollutants into water, prior authorization or registration based on general binding rules where such a requirement is not otherwise provided for under other legislation. These controls shall be periodically reviewed

and, where necessary updated. Besides the existing Ground Water Regulations and the Regulations establishing a Framework in the Field of Water Policy, groundwater protection also features in other environmental legislation and policies, e.g. the Waste Management (Landfill) Regulations, 2002⁸⁴, the Quality of Water intended for Human Consumption Regulations, 2004⁸⁵, the Protection of Waters against Pollution caused by Nitrates from Agriculture Sources Regulations, 2001⁸⁶, the Plant Protection Products Regulations, 2004⁸⁷, Flora, Fauna and Natural Habitats Protection Regulations, 2003⁸⁸ and the Biocides Directive (98/8/EC) which is in the process of being adopted into Maltese legislation. These regulations try to lay down rules where ground water is protected from diffused sources that might cause pollution. They lay down a set of measures, which the Competent Authority designated by each set of regulations, has to implement in order to prevent or control the input of pollutants, in groundwater. Controls may take the form of prior authorization or registration based on general binding rules where such a requirement is not otherwise provided for under other legislation, in order to prohibit the entry of pollutants into the groundwater. These controls shall be periodically reviewed and, where necessary updated in order to adhere to the EU Directives and policies on this matter.

6.2.1 Waste Management (Landfill) Regulations, 2002

The aim of these Regulations is to provide for stringent operational and technical requirements on the waste and landfills, in order to provide for measures, procedures and guidance to prevent or reduce as far as possible negative effects on the environment, in particular, amongst other things the pollution of groundwater, from land filling of waste, during the whole life-cycle of the landfill. This scope has been clearly stipulated in Section 1 (3) of the Regulations, hence it is an obligation for the Maltese Competent Authority⁸⁹ to manage landfills and at the same time guarantee the protection of groundwater from pollution.

Protection of groundwater has to be taken into consideration when the location of a landfill is to be determined. In fact in Schedule 1 Section 1 (b) it is stated that “*the location of a landfill must take into consideration requirements relating to the existence of groundwater...*” Furthermore there has to be water control and leakage management in order to prevent surface water/or groundwater from entering into the land filled waste.

Provisions in the same schedule also provide for the means on how the protection of groundwater is to be achieved. This can be done by the combination of a geological barrier and a bottom liner during the operation/active phase and by the combination of a geological barrier and a top liner during the passive phase/position closure.

Schedule 3 Article 4 provides specifically for the protection of groundwater, whereby sampling measurements have to be taken so as to provide information on groundwater

⁸⁴ LN 168 of 2002

⁸⁵ LN 23 of 2004

⁸⁶ LN343 of 2001

⁸⁷ LN 115 of 2004

⁸⁸ LN 257 of 2003

⁸⁹ The Competent Authority to implement these legal obligations is the Malta Environment and Planning Authority, whereas Waste Serve is the operator.

likely to be affected by the discharging of waste. These samples will then be monitored and analyzed in order to check whether the landfill site is having a significant adverse environment effect. If an analysis of a groundwater sample shows a significant change in water quality, this would be tantamount to the landfill site having a significant adverse effect.

So whilst these regulations are intended specifically for the management and monitoring of landfills yet they still address the protection to ground water from being polluted by land filled waste

6.2.2 Quality of Water Intended for Human Consumption Regulations, 2004

The Quality of Water intended for Human Consumption Regulations, 2004 were enacted under the Food Safety Act, 2002, and came into force on 15th January 2004. These regulations transpose in full the provisions of the Directive on the Quality of Water Intended for Human Consumption 98/83/EC. The scope of these regulations is to protect human health from adverse effects of any contamination of water intended for human consumption by ensuring that it is wholesome and clean, and at the same time set up a regime that provides protection to persons consuming the water.

These regulations give a definition to the “*source*” from where water is extracted and this includes “*the outlet of water treatment works, a borehole, a pumping station, blending point or a service reservoir, whether permanent or not*”.⁹⁰ Many of the sources mentioned are sources from where underground water is extracted. The competent authority is the Public Health Department which together with water suppliers are responsible to carry out all the necessary measures to ensure the best quality of water intended for drinking.

In fact the Public Health Department shall take necessary measures:

- to ensure that regular monitoring of the quality of water intended for human consumption is carried out, in order to ensure that the water supplied to the consumer meets the requirements of the regulations.

On the other hand it is the responsibility of water suppliers to:

- adopt programmes in order to monitor all water intended for human consumption.

Water suppliers are also required to prepare and maintain a record of water supply zones which establish sampling frequencies, in order to ensure compliance with these regulations, which information shall be made available to the public. For better controls the competent authority may determine that water suppliers publish an annual report of their operations.

These regulations are another legal tool whereby the conservation of underground water is safeguarded from pollution. This fact is not directly specified in the regulations but the competent Authority is responsible for ensuring that the consumer receives good drinking water and hence safeguards are imposed from the stage when

⁹⁰ Art. 2

water is still at source. Furthermore these regulations want to ensure protection of the consumer by obliging also water suppliers to take the necessary measures to protect this natural resource.

6.2.3 Protection of Waters against Pollution caused by Nitrates from Agricultural sources Regulations 2001

The objective of these Regulations, which came into force on 14th January 2003, by means of Legal Notice 24 of 2003, is to reduce water pollution caused or induced by nitrates from agricultural sources and preventing further such pollution. In fact the competent Authority⁹¹ is obliged to designate as vulnerable zones all known areas of land within the Maltese territory, which drain into the waters, which could be affected by pollution. It also has to establish and apply action programmes in respect of designated vulnerable zones. These programmes will help the Competent Authority to monitor the nitrate content of waters (surface waters and ground water) at selected measuring points which make it possible to establish the extent of nitrate pollution in the waters from agricultural sources.

Furthermore Codes of good agricultural practice have to be established in order to provide for all waters a general level of protection against pollution.

6.2.4 Plant Protection Products Regulations, 2004

These Regulations were issued under the Pesticides Control Act 2001 (Act No.XI of 2001). The scope of these regulations is that to provide for the authorization and control of the dealing, advertising and use of any plant protection product or any other active substances intended for the use in any plant protection product as specified in the Act. By 1st of May the provisions of these regulations will all be in force.

These Regulations also provide for the protection of groundwater and it is specifically stipulated, in Article 6(2) (g) (v) that the Director of the Department of Plant Health, before issuing an authorization to place a plant product on the market, he has to be satisfied amongst other things that the plant product and even active substances contained with the plant product are not going to contaminate groundwater. And at the same time Article 4 make it clear that no person shall promote or deal, or place on the market any plant product or active substance unless he is in possession of an authorization issued to him by the Director of the Department of Plant Health.

Furthermore registered active substances shall be classified by the Director on the basis of information about this substance which he must receive upon application, and also after taking into consideration the opinion of the Pesticides Control Board and he is satisfied amongst other things that:

“the dispersal or any residue of such active substance in the environment through normal use does not result in unacceptable effects on the environment...”

⁹¹ The Malta Environment and Planning Authority

Here the term groundwater is not specifically mentioned but the word 'environment' can be given a wide interpretation to include also the natural resource of ground water.

Authorizations issued by the Director shall be valid for a period not exceeding ten years, but it can be extended if there is compliance with these regulations. The authorization can be suspended or revoked if any of the requirements are not observed. This means that if the plant protection product or any active substances thereof start to have any unacceptable effect on the environment, such that it may contaminate ground water, then the authorization can be immediately suspended or revoked.

So even these regulations whilst regulating the placing on the market of plant products they afford protection of groundwater from any pollution or harm which might be caused by the plant products introduced in the local market.

6.2.5 Flora, Fauna and Natural Habitats Protection Regulations, 2003

These regulations were issued under the Environment Protection Act, 2001 and the Development Planning Act, 1992. These regulations were adopted to fully transpose into Maltese legislation the provisions of the Habitats Directive 92/43/EEC. The aim of the regulations is like that of the Directive, that is to provide a framework for conservation of natural habitats and the populations of species of wild fauna and flora.

In Part I (Interpretation) Art. 2, natural habitats are defined as “*terrestrial or aquatic areas distinguished by geographic, abiotic and biotic features, whether entirely natural or semi natural.*” Since natural habitats include also aquatic areas one can deduce that areas where there is groundwater are to be protected and monitored.

The Competent Authority, which under these regulations is the Malta Environment and Planning Authority binds itself to protect and conserve natural habitats which include aquatic areas. In fact in Schedule I of the regulations, in No. 3 there is a whole list of fresh water habitats both of standing water as well as running water. Under this schedule one finds the natural habitat types whose conservation requires the designation of special areas of conservation. Once the Competent Authority identifies the special areas of conservation, they will be included under the National Ecological Network, as required under these regulations. This network will help the Authority in better monitoring these sites and in the future the list of local special conservation areas will be included in the Pan-European Ecological Network.

Directive concerning the placing of biocidal products on the market 98/8EC

This Directive concerns:

- (a) the authorization and the placing on the market for use of biocidal products within Member States;
- (b) the mutual recognition of authorizations within the Community
- (c) the establishment at Community level of a positive list of active substances which, may be used in biocidal products.

Like in the Plant Protection Products Regulations, 2004, before authorization for the placing on the market of biocidal products is granted the Competent Authorities are

obliged to follow certain conditions. Two of these conditions which have to be satisfied prior to authorization take into consideration the protection of groundwater from any adverse effects that such biocidal products or active substances of such products may produce. In fact the authority has to ensure that the biocidal product that are going to enter their territory has no unacceptable effects itself or as a result of its residues, on human or animal health, directly or indirectly (e.g. through drinking water, food, feed, indoor air or consequences in the place of work) or on surface water and **groundwater**⁹². And also that it has no unacceptable effect itself, or as a result of its residues, on the environment having particular regard to its fate and distribution in the environment particularly contamination of surface waters (including estuarian and seawater), **groundwater** and drinking water⁹³. Cancellation of authorization might occur if any one of these conditions is not satisfied.

Like other mentioned regulations, this piece of Community legislation takes into consideration the protection of groundwater even though it is not a Directive specifically intended to afford protection and measures for this purpose.

This directive is being transposed into Maltese legislation and it will soon be published.

6.2.6 Directive concerning the placing of biocidal products on the market 98/8EC

This Directive concerns:

- (a) the authorization and the placing on the market for use of biocidal products within Member States;
- (b) the mutual recognition of authorizations within the Community
- (c) the establishment at Community level of a positive list of active substances which, may be used in biocidal products.

Like in the Plant Protection Products Regulations, 2004, before authorization for the placing on the market of biocidal products is granted the Competent Authorities are obliged to follow certain conditions. Two of these conditions which have to be satisfied prior to authorization take into consideration the protection of groundwater from any adverse effects that such biocidal products or active substances of such products may produce. In fact the authority has to ensure that the biocidal product that are going to enter their territory has no unacceptable effects itself or as a result of its residues, on human or animal health, directly or indirectly (e.g. through drinking water, food, feed, indoor air or consequences in the place of work) or on surface water and **groundwater**⁹⁴. And also that it has no unacceptable effect itself, or as a result of its residues, on the environment having particular regard to its fate and distribution in the environment particularly contamination of surface waters (including estuarian and seawater), **groundwater** and drinking water⁹⁵. Cancellation of authorization might occur if any one of these conditions is not satisfied.

⁹² Art. 5 (1) (iii)

⁹³ Art.5 (1) (iv)

⁹⁴ Art. 5 (1) (iii)

⁹⁵ Art.5 (1) (iv)

Like other mentioned regulations, this piece of Community legislation takes into consideration the protection of groundwater even though it is not a Directive specifically intended to afford protection and measures for this purpose.

This directive is being transposed into Maltese legislation and it will soon be published.

6.3 Sustainable Water Use

The Draft Regulations establishing a Framework for Action in the Field of Water Policy call for formulation of Water Catchment Plans and Programmes of Measures which aim at the sustainable management of groundwater resources, by maintaining a good groundwater status according to the parameters set in annexes to the regulations themselves.

The Commission for Sustainable Development, established under the Environment Protection Act, is an advisory body entrusted with the role of assessing whether natural resources are being utilized in a sustainable manner. The Commission is entrusted with the formulation of sustainable development strategy. At this time the strategy which should address also water resources, is not yet finalized.

7. Administration of Groundwater

The earliest legal sources, which speak of Government groundwater administration, are found in the Code of Police Laws:

“No person shall take away, from any aqueduct, fountain, cistern, conduit, or other like place, public water, not provided for the gratuitous use of the public, without the permission of the officer in charge of the distribution of public waters”⁹⁶.

“Every person allowed to take water by the officer mentioned in the last preceding section, shall make sure that the cistern which is to hold the water, and the conduits or tubes bringing the water to such cistern are not broken or damaged so as to prevent the water supplied from running considerably to waste”⁹⁷.

Over the years these provisions although still in force, have been superseded by other legal provisions under various legal sources. It is useful to look into all the legal sources which have been enacted even those which were repealed in order to trace how government administration of groundwater has evolved.

7.1 The Water Board and the Irrigation Board

When the Water Pumps Ordinance of 1938 established the Water Board, this administrative authority was entrusted with declaring “*Water Controlled Areas*”. The Water Board had the discretion to refuse or prohibit the use of water pumps by issuing licenses.

⁹⁶ Chapter 10 Section 148 of the Laws of Malta.

⁹⁷ Ibid Section 149.

The Water Board was also entrusted with awarding compensation for losses or damages “*directly attributable*”, to the prohibition or restriction of the use of any water pump. The power to declare “*Water Controlled Areas*” was transferred to the Minister the responsible for water supply. Under the Underground Water Ordinance, which repealed the Water Pumps Ordinance, the power to allow or prohibit the sinking of wells and the use of wells and pumps was also transferred to this Minister but it was the Water Board which was entrusted with issuing licenses for any person, who sought to sink or extend a well in, to install or add to a water pump for drawing from a well, or to maintain such a well in a workable condition in Water Controlled Areas.

In 1939, with the promulgation of Irrigation Ordinance, the Irrigation Board was set up. The Minister responsible for Agriculture had the power to declare irrigation areas to: “*provide any area within Malta with a supply of water for the purpose of irrigation of the fields in that area*”. The Minister for Agriculture had certain powers to issue regulations “*including regulations to fix the rate, at which water for irrigation was supplied in Irrigation Area and to adjust boundaries for areas declared to be an Irrigation Area*”.

At that time there was a Department of Water Works under the Ministry responsible for water, which was legally obliged to provide adequate supplies of water to be made available for the irrigation of land in an area declared to be an “*Irrigation Area*”.

The Irrigation Ordinance gave the Manager various powers including the right to enter on any land, (whether designated as an irrigation area or not) to carry out all the necessary works to provide water for the irrigation area, to test, inspect and maintain the water supply system and to repair any breakage or defects which could have ensued. In turn any person who is an owner⁹⁸, could request the Manager to divert or remove any connection with the water supply system, if he was to erect a building or carry out works on the land, which could not otherwise be carried out unless to removal of such objects was carried out.

A license from the Board established under this Ordinance, was required for the sinking of wells, bore holes or trenches in Irrigation Areas, for the purpose of obtaining underground water. This led to two different authorities entrusted with the power of issuing licenses for the extraction of ground water at that time. The Board constituted under the Irrigation Ordinance issued licenses for the extraction of ground water in “*Irrigation Areas*”, whilst the Board constituted under the Groundwater Ordinance was responsible for issuing licenses for the extraction of groundwater in “*Water Conservation Areas*”.

The Irrigation Board was also entrusted with assessing expenses incurred and improvements made, by the owner for the purpose of irrigating land in order to recommend or otherwise an increase in rent of the agricultural tenement.

⁹⁸ Defined to include any person who is in control of the land otherwise than by way of a short lease comprised in an irrigation area.

7.2 The Water Services Corporation⁹⁹.

The setting up of the Water Services Corporation superseded the Water Works Department, as a public body corporate, established under the Water Services Corporation Act which in turn repealed the Irrigation Ordinance and the Groundwater Ordinance. This Act empowers the Water Services Corporation to acquire, transform, manufacture, distribute and sell potable and non-potable water. It is also entrusted with the treatment and disposal and re-use of sewage and wastewater and re-use of storm water run-off. The Act transferred to the Water Services Corporation certain installation equipment and property. When the Act was published in 1991, the Water Services Corporation assumed the role of both the regulator and the operator, but with the coming into force of the Malta Resources Authority Act of 2001¹⁰⁰, the Water Services Corporation's role was reviewed and retained only the role of an operator. The regulator's role was assumed by the Malta Resources Authority.

The Water Services Corporation may:

- Acquire, produce, keep, distribute, sell, export or otherwise dispose of water (other than bottled table water) for domestic, commercial, industrial or other purposes;
- Conserve, augment and operate water resources and sources of water supply;
- Undertake and perform such other functions relating to water conservation supply and distribution, as it may deem appropriate.

The Water Services Corporation's advisory role to the Minister responsible for water¹⁰¹, has been retained although strictly speaking, it does not fall under the role of an operator. Similarly the Water Services Corporation is "...to encourage the conservation and appropriate re-use of water resources".

The Water Services Corporation Board, shall be responsible for the formulation of Authority's policy and the Chief executive shall be responsible for the general administration of the affairs and business of the Corporation. The Board shall consist of not more than nine members, one of which will be elected by the employees, the rest shall be appointed by the Minister from amongst persons appearing to him to have had experience, and shown capacity, in matter relating to water technology, or water or waste water management, or the organization of workers, or of finance or administration and after having taken regard of their experience and familiarity with the requirements and circumstances of agriculture, industry commerce and tourism and with matters related to the conservation of the environment and the development of public amenities.

The operative role of the Water Services Corporation in relation to groundwater is

⁹⁹ Cap 355 of the Laws of Malta was enacted by Act XXIII of 1991 and subsequently amended by LN 129/92 and Act XV of 1995, XVI of 1997 and XXV of 2000 established the Water Services Corporation.

¹⁰⁰ Established under Chapter 423.

¹⁰¹ Chapter 356 Section 3 (3) (f).

expressed in the Act¹⁰², which lists the duties of the Corporation with respect to the supply of water. This section was amended by Malta Resources Authority Act, to specify the separate roles of the Water Resources Corporation and the Malta Resources Authority.

As an operator, the Corporation has a specific role:

“To the extent that it is so authorized to do, survey any land, to inspect and well and to cause the sinking of bores or other works for the purpose of ascertaining the nature of the subsoil or the presence, quality or quantity of underground water in is and to cause the sinking of shafts and the driving of subterranean galleries”.

“The Corporation may provide technical assistance to other persons desirous of sinking wells. Driving galleries, constructing conducts or otherwise to improve their water supply”.

The Malta Resources Authority Act deleted the provisions under the Water Services Corporation Act, which empowered the Water Services Corporation to issue licenses for the supply and sale and other functions concerning waters, water pumps and other apparatus related to the supply of water. Such an amendment was necessary to divest the Water Services Corporation from the power to issue licenses, as such a power pertains to the regulator which role now pertains to Malta Resources Authority.

7.3 The Malta Resources Authority¹⁰³

Under the Malta Resources Authority Act, one of the main functions of the Malta Resources Authority is¹⁰⁴:

“Regulating, monitoring, keeping under review, all practices, operations, activities relating to water and for the granting of licenses/permits/authorization, relating to any operation/activity concerning water”¹⁰⁵.

The Malta Resources Authority, shall with respect to water resources and sources of water supply, “secure” and “regulate” the;

- Acquisition
- Production
- Storage
- Distribution
- Disposal
- Conservation
- Augmentation
- Operation

¹⁰² Ibid, Section 18.

¹⁰³ Established under Chapter 423.

¹⁰⁴ Ibid, Section 4 (2).

¹⁰⁵ The definition of water when used in relation to any practice, operation, activity that is regulated by this Act, shall include drainage and sewage services but not bottled table water. This means that “water” under this definition includes groundwater.

Of “water” for all purposes of

- Treatment
- Storage
- Disposal
- Use

The Minister for resources has the power to appoint advisory committees in the water sector, to advise the Authority on such matters and to perform such functions as the Minister may specify in the instrument of appointment¹⁰⁶. In keeping Authority’s primary function “*to secure and regulate the conservation ... of water resources and sources of water supply*”, the enabling provisions¹⁰⁷, of the Malta Resources Authority Act, enable the Minister for Resources to issue regulations to provide for licensing procedures such that no person shall carry out any activity or operation (or be so engaged) with respect to water, unless such person in possession of a license, permit or other authorization of the Authority. Failure to do so, renders the offender liable to a criminal offense, which is punishable upon prosecution to Lm50,000 (117,000 Euros) or to imprisonment for a term not exceeding two years or to both such fines and imprisonment¹⁰⁸.

Whilst the Malta Resources Authority, is responsible as a regulator, regulations that may also be issued by the Minister for Resources and which concern the regulation of groundwater management are:

- To ensure fair competition of water prices
- To undertake studies/issues guidelines
- To regulate services required relating to water
- To set qualifications for persons employed in activities relating to water
- To provide for penalties for offences.

Authorized officers of the Authority may enter any premises to monitor any, “*waste of resources or anything contrary to the provisions of this Act, regulations, licenses, permits, authorizations issued hereunder*”¹⁰⁹.

The Act provides for the right of appeal before the “*Resources Appeals Board*”, for any decision taken by the Authority in accordance with the provisions of the Act, which may be made by any person so aggrieved by such decision. The person has the right, to go to the Court of Appeal, if he still feels dissatisfied with the decision of the Appeals Board.

The Malta Resources Authority is the main regulator with respect to the sustainable

¹⁰⁶ Ibid, Section 24

¹⁰⁷ Ibid, Section 28.

¹⁰⁸ Ibid, Section 26.

¹⁰⁹ Ibid, Section 30.

management and use of groundwater resources, as a source of drinking water supplies, irrigation and other consumption uses. The most recent legal sources which directly regulate groundwater depletion and pollution, namely the Regulations for the Protection of Groundwater Against Pollution caused by Dangerous Substances appoint the Malta Resources Authority as the competent authority for the prevention of groundwater pollution from certain “*dangerous substances*”, which are listed as schedule I and II to the regulations¹¹⁰. Furthermore the Malta Resources Authority is responsible for providing remedial measures, “*as far as possible to check or eliminate the consequences of pollution which have already occurred*”¹¹¹.

As a result the Malta Resources Authority is responsible for:

- Prohibition of direct discharges of substances in list I of these Regulations
- Limiting all indirect discharges of substances in list II of these Regulations
- Limiting all direct discharges of substances in list II of these Regulations
- The disposal/tipping of said substances, which might lead to indirect discharge
- The granting of a special authorization on a case by case basis
- The granting or refusal of an authorization for such disposal/discharge
- Require individual to take all the required precautions to prevent indirect discharge/prevent groundwater pollution by these substances.

Prior investigations are a precondition before authorizations may be issued by Malta Resources Authority and after Malta Resources Authority carries out the, “*requisite surveillance*”¹¹² on groundwater, especially its quality.

When granting its authorization for direct discharges and authorized waste water disposal that inevitably causes indirect discharges, Malta Resources Authority requires the collaboration of the Water Services Corporation which are responsible for drainage.

7.4 The Malta Environment and Planning Authority (MEPA)

Under the Environment Protection Act includes “*water*”. The duty to protect the environment and to manage natural resources in a sustainable manner is incumbent upon “*everyone together with the government*”¹¹³. The Act continues to specify however, that is it the Government’s duty to protect the environment, by taking certain guiding policy decisions, based on a series of principles listed under this article. The principles would ensure that the environment is protected “*for the present benefit of and future generations*”. Top of the list of these principles which the

¹¹⁰ LN 203/2002.

¹¹¹ Ibid Article 1 (3).

¹¹² LN 203/2002 Article 8

¹¹³ Chapter 465 of the Laws of Malta Section 2.

government is legally duty bound to consider when formulating policy, declares that the government is to, “*manage the environment (and hence groundwater resources) in a sustainable manner by integrating and giving due consideration to environment concerns in decisions on socio-economic and other policies*”.

The Act established an Authority, the Malta Environment and Planning Authority¹¹⁴, which is entrusted with implementing the Government’s duties under this Act. The Authority has also an advisory role in assisting the Minister responsible for the Environment to formulate policies relating to the “... *sustainable management of natural resources*”. This implies that under the Act, MEPA also has the responsibility to assist in the formulation of policies and their implementation with respect to the sustainable use of ground water resources¹¹⁵.

It is also incumbent upon MEPA, under the Environment Protection Act, “*to co-operate and make arrangements with other entities... to better monitor implementation and compliance with the provisions of the Act*”¹¹⁶. This calls for the conclusion of Memoranda of Understanding or other similar instruments, which would facilitate co-operation and delineate responsibilities to avoid duplication and conflict with the Malta Resources Authority, who also has regulatory functions in this respect. Another function which MEPA has and which may overlap with that of the Malta Resources Authority with respect to underground water resources, is the “*establishment of threshold levels of discharge from any activity involving products, substances...*”¹¹⁷.

MEPA is also empowered under the Act. to issue licenses for any person who conducts any activity, which may lead to the discharge or permit to be discharged, such substance or energy into the environment.

The Minister of the Environment has wide enabling powers to issue regulations, which may be used to affect the management, and use of groundwater resources needed to be beefed up. A few examples of these enabling provisions are the power to issue regulations:

- Establish, co-ordinate and enforce environment quality control systems and make provisions for the carrying out of assessments of environmental risks of both new and existing establishments;
- Set objectives, issue directives and establish codes of practice, all in relation to the environment, to the reduction, reuse, recovery, treatment, storage and disposal of materials as may be prescribed, to all human activity which effects the environment and to ensure sustainable development;
- With regards to integrated pollution prevention and control:
 - Establish systems which ensure such prevention and control;

¹¹⁴ LN 107/2002. Nomination of Malta Environment & Planning Authority.

¹¹⁵ Art 7 (1) (a) .

¹¹⁶ Ibid Art 7 (1) (b) (i)

¹¹⁷ Ibid 7 (1) (b) (v)

- Control the keeping, management, trading in or use of substances and other activities, which may cause or facilitate pollution;
- Set standards including maximum of permitted levels in quantitative or qualitative terms, of discharge and emissions into the environment of materials, substances or energy with regard to the use of any technology, equipment, matter, substance, method or procedure in relation thereto;
- Establish methodologies to be used in the monitoring of discharge and emission of substances and, or energy into the environment and to regulate the use of information gathered during such monitoring;

Again both MEPA and the Malta Resources Authority need to delineate these responsibilities via a Memorandum of Understanding, between them to determine which is the competent authority to issue such licenses, so as to avoid duplication with respect to operations relating to extraction, use or other forms of management of groundwater.

7.5 Other Institutions under the Environment Protection Act

There are other institutions established under the Environment Protection Act which have a relevant role with respect to the Administration of groundwater. The National Commission for Sustainable Development, is an advisory body entrusted with the role (amongst other things) of assessing whether natural resources are being utilized in a sustainable manner.

The Environment Protection Fund is another institution set up under the Environment Protection Act, responsible:

- To finance studies to safeguard the environment as well as works which may be needed for that purpose;
- To remedy any harm caused to the environment in connection with any contingency or emergency plan
- To finance such other activities, including activities organized by non-governmental organizations, as the Minister in consultation with the Authority may prescribe.

In other words the Fund, may be used to finance the enhancement of ground water resources. The Fund's income sources are listed in the Act. What is especially innovative about the fund is the legal right of its chair, to institute an action for environmental damages. This action for environment damages is separate from a civil action for damages. Environmental damages are awarded not for any civil damages incurred or for loss of profits but for the degradation of the environment and hence even groundwater, if damages are caused to the resource.

The Chairman of the Fund, may thus be in a position to make an action for environmental damages against any person and hence even Malta Resources Authority and Water Services Corporation and the Government for example, if these

entities are responsible through their negligence or non-performance of their duties to safeguard ground water from degradation.

Punishments which may be prescribed under the regulations published under the Environment Protection Act, may not be higher than a fine of one hundred thousand liri (234,000 Euros) or to imprisonment for a term not exceeding two years or to both such fine and imprisonment.

7.6 Administrative Functions under Subsidiary Legislation transposing the *Acquis Communautaire*

Besides the existing Ground Water Directive and the Water Framework Directive, groundwater protection also features in other environmental legislation and policies, e.g. the Landfill Directive (99/31/EC), the Drinking Water Directive (80/778/EEC) as amended by Directive 98/83/EC, the Nitrates Directive (91/676/EEC), the Plan Protection Products Directive (91/414/EEC), the Biocides Directive (98/8/EC), and the Commission Communication towards a Thematic Strategy for Soil Protection.

7.6.1 The Protection of Groundwater against Pollution caused by Certain Dangerous Substance

The Regulations for the Protection of Ground Water against Pollution caused by Dangerous Substances, 2002¹¹⁸, which entered into force on 1st December 2002 by LN 202/2002 transpose in full the obligations laid down in Directive 80/68 on groundwater. These regulations were issued under the Malta Resources Authority Act, 2002, and the Malta Resources Authority is the Competent Authority responsible to carry out the necessary measures for the protection of groundwater.

These regulations prohibit the direct discharges of substitutes enlisted in list I, and the Malta Resources Authority shall either prohibit any such disposal or tipping or grant its authorization once it ensures that all the necessary technical precautions “*to prevent such discharge are observed*”.¹¹⁹ Also, “*prior investigation*” is carried out for the direct discharge of substances in List II, and for the disposal or tipping for the purpose of disposal of said substances, which disposal might lead to indirect discharge. The Malta Resources Authority may decide to grant an authorization for these types of discharges only if “*all technical precautions for preventing ground water pollution by these substances*”¹²⁰ have been observed.”

The regulations continue to specify that the “*prior investigation*” referred to as a precondition before authorizations are issued by the Malta Resources Authority: “*shall include examination of the hydrogeological conditions of the area concerned, the possible purifying powers of the soil and subsoil and the risk of pollution and alteration of the quality of the groundwater from the discharge and shall establish whether the discharge of substances into groundwater is a satisfactory solution from the point of view of the environment.*” Apart from “*prior investigations*” the authorizations above-mentioned shall not be issued by the Malta Resources Authority before the groundwater “*especially its quality*” undergoes the “*the requisite*

¹¹⁸ LN 203/2002

¹¹⁹ Section 4(2) (b).

¹²⁰ Ibid.

surveillance". Even though the regulations like in the Directive do not specify in legal terms what is meant by "*requisite surveillance*".

The duration of authorizations granted, is to be determined by the Malta Resources Authority, according to their own discretion. In fact authorization can only be granted for a limited period and shall be "*be reviewed, amended or withdrawn*"¹²¹. It is also incumbent on the Malta Resources Authority to monitor compliance with the conditions stipulated in the authorization and the effects of the discharges so authorized on the groundwater.

7.6.2 The Water Policy Framework Regulations

The Water Framework Directive adopted through Maltese legislation by the Water Policy Framework Regulations, 2004, establish a framework of Action for the protection of "*inland surface waters*", "*transitional waters*", "*coastal waters*" and "*groundwater*". The term groundwater is defined from various aspects. In fact one finds the definition of groundwater, but in addition to this there is the definition of "*Body of groundwater*" which means a distinct value of groundwater within an aquifer. The definition of "*inland water*" also includes "*all groundwater on the landward side of the baseline from which the breadth of territorial sea is measured*".

These regulations define Malta Resources Authority as the Competent Authority in so far as "*inland water*" is concerned. Hence it is the competence of the Malta Resources Authority to take all necessary measures to ensure that the environment objectives established under these regulations are met and to coordinate "*all programs of measures for the whole of the catchment district.*" The Malta Resources Authority has a number of obligations to implement under these regulations in order to ensure good management, as well as to protect groundwater from pollutants. This exercise of implementation entails a lot of work and studies to identify water catchment districts, to see which areas within these districts require special protection under specific legislation for the protection of groundwater. The regulation lays down time frames for the Competent Authority to achieve and start adopting the required implementation measures. This framework has to be worked out together with the public. In fact the Competent Authority must ensure that the public is consulted and informed. Furthermore the regulations also oblige the Competent Authority to encourage that active involvement of interested parties in the implementation of these regulations, particularly in relation to the formulation, review and updating of the water catchment plans.

7.6.3 Regulations on the Landfilling of Waste

The aim of this Landfill Directive (1999/31/EC) is to provide for stringent operational and technical requirements on the waste and landfills, in order to provide for measures, procedures and guidance to prevent or reduce as far as possible negative effects on the environment, in particular, amongst other things the pollution of groundwater, from land filling of waste, during the whole life-cycle of the landfill. This directive has been transposed by the Waste Management (Landfill) Regulations,

¹²¹ Art. 11

2002¹²² in Section 1 (3), hence it is an obligation for the Maltese Competent Authority to manage landfills and at the same time guarantee the protection of groundwater from pollution.

All the above safeguards and methods have been adopted into Maltese legislation by means of LN 168 of 2002 and the Competent Authority to implement these legal obligations is the Malta Environment and Planning Authority and Waste Serve.

7.6.4 The Regulation of Waters against Pollution caused by Nitrates from Agriculture Sources

The objective of these regulations which transpose Directive 91/676/EEC is to reduce water pollution caused or induced by nitrates from agricultural sources and preventing further such pollution. In fact Member States are obliged to designate as vulnerable zones all known areas of land in their territories, which drain into the waters, which could be affected by pollution, and have also to establish and apply action programmes in respect of designated vulnerable zones.

Furthermore Codes of good agricultural practice have to be established in order to provide for all waters a general level of protection against pollution. The Department of Agriculture is to issue these codes of good agricultural practice but the competent authority is MEPA.

7.6.5 The Regulations on The Quality of Water Intended for Human Consumption

The objective of the regulation transposing the directive 98/83 EC is to protect human health from adverse effects of any contamination of water intended for human consumption by ensuring that it is wholesome and clean. Considering the fact that water intended for human consumption may be extracted from underground, one can say that the measures of protection found in this Directive are intended to enhance the quality of groundwater in order to ensure protection to human health. In fact the definition of water intended for human consumption is quite vast and includes “*all water either in its original state or after treatment, intended for drinking...*”.

This Directive has been fully transposed into Maltese legislation by means of the Quality of Water intended for Human Consumption Regulations, 2004¹²³ enacted under the Food Safety Act, 2002, and came into force on 15th January 2004. These regulations give a definition to the “*source*” from where water is extracted and this includes “*the outlet of water treatment works, a borehole, a pumping station, blending point or a service reservoir, whether permanent or not*”.¹²⁴ Many of the sources mentioned are sources from where underground water is extracted. The Public Health Department is the competent authority which regulates water suppliers take all the necessary measures to ensure the best quality of water intended for drinking, as laid down in the Directive.

¹²² LN 168 of 2002

¹²³ LN 23 of 2004

¹²⁴ Art. 2

In fact the Public Health Department shall take necessary measures to ensure that regular monitoring of the quality of water intended for human consumption is carried out, in order to ensure that the water supplied to the consumer meets the requirements of the regulations. On the other hand it is the responsibility of water suppliers to adopt programmes in order to monitor all water intended for human consumption. Water suppliers are also required to prepare and maintain a record of water supply zones which establish sampling frequencies, in order to ensure compliance with these regulations, which information shall be made available to the public. For better controls the Health Authority may determine that water suppliers publish an annual report of their operations.

7.6.6 The Regulations on Plant Protection Products

These regulations transpose the Directive 91/414/EEC concerns the authorization, placing on the market, use and control within the Community of plant protection products in commercial form and the placing on the market and control within the Community of active substances intended to be used as plant protectors. This Directive also provides for the protection of groundwater and stipulates that Member States should not authorize the introduction of plant production products, which among other things may have a harmful effect on human or animal health, or on groundwater¹²⁵ or an unacceptable influence on the environment, particularly contamination of water including drinking water and groundwater.

This Directive has been transposed into Maltese legislation by means of the Plant Protection Products Regulations, 2004 issued under the Plant Protection Act 2001. By 1st of May the provisions of these regulations will all be in force. The Department of Plant Health is the competent authority which is responsible for issuing before an authorization to place any plant product on the market. The competent authority, to do so, has to be satisfied amongst other things that the plant product and even active substances contained in the plant products are not going to contaminate groundwater.

7.6.7 The Regulation of Biocidal Products on the market

This Directive concerns:

- (d) the authorization and the placing on the market for use of biocidal products within Member States;
- (e) the mutual recognition of authorizations within the Community
- (f) the establishment at Community level of a positive list of active substances which, may be used in biocidal products.

The competent authority is the Department of Plant Health as in the previous Directive, before authorization for the placing on the market of biocidal products is granted, the Competent Authority is obliged to follow certain conditions. Two of these conditions which have to be satisfied prior to authorization take into consideration the protection of groundwater from any adverse effects that such biocidal products or active substances of such products may produce. In fact the competent authority has to ensure that the biocidal product that are going to enter their

¹²⁵ 91/414/EEC Article 4.

territory has no unacceptable effects itself or as a result of its residues, on human or animal health, directly or indirectly (e.g. through drinking water, food, feed, indoor air or consequences in the place of work) or on surface water and **groundwater**¹²⁶. And also that it has no unacceptable effect itself, or as a result of its residues, on the environment having particular regard to its fate and distribution in the environment particularly contamination of surface waters (including estuarian and seawater), **groundwater** and drinking water¹²⁷. Cancellation of authorization might occur if any one of these conditions is not satisfied.

This directive is being transposed into Maltese legislation and it will soon be published.

7.6.8 The Regulation on the Protection of Flora, Fauna and Natural Habitats

The aim of these Regulations like the Directive 92/43/EEC which they transpose is to provide a framework for conservation of natural habitats and the populations of species of wild fauna and flora. Natural Habitats are defined as “*terrestrial or aquatic areas distinguished by geographic, abiotic and biotic features, whether entirely natural or semi natural.*” Since natural habitats include also aquatic areas one can deduce that areas where there is groundwater are to be protected and monitored.

This Directive has been transposed into Maltese legislation by means of the Flora, Fauna and Natural Habitats Protection Regulations, 2003¹²⁸. The above definition has been adopted by these regulations, hence the Competent Authority, which under these regulations is the Malta Environment and Planning Authority binds itself to protect and conserve natural habitats which include aquatic areas. In fact in Schedule I of the regulations, in No. 3 there is a whole list of fresh water habitats both of standing water as well as running water. Under this schedule one finds the natural habitat types whose conservation requires the designation of special areas of conservation. Once the Competent Authority identifies the special areas of conservation, they will be included under the National Ecological Network, as required under these regulations. This network will help the Authority in better monitoring these sites and in the future the list of local special conservation areas will be included in the Pan-European Ecological Network.

7.6.9 Thematic Strategy for Soil Protection

On 19th November 2003, the European Parliament has adopted a text urging the Commission to present by July 2004, a thematic strategy for soil protection which should be based on the strengthening of current policies. Through an integrated approach, it should define problems, qualitative and quantitative objectives and the means by which they can be achieved, timetables and general principles for evaluation and monitoring geared amongst other things to protect soil in its role storing CO₂, and to secure water resources. It also stipulates that when Member States carry out impact assessments on underground and surface infrastructure and

¹²⁶ Art. 5 (1) (iii)

¹²⁷ Art.5 (1) (iv)

¹²⁸ L.N. 257 of 2003

urban construction projects, they should consider the effects on natural surface or under ground water flows.

Once this Thematic Assessment is finalized Malta as a Member State of the European Union will take the necessary measures to align itself with the required protective measures. In the meantime the Soil Protection Unit under the Ministry of Rural Affairs and the Environment has established a Soil Information System and intends to implement a programme for soil quality monitoring. This will serve as a basis for developing an Action Plan for Soil Protection that addresses the main threats to soil in the Maltese Islands.

7.6.10 The Environment Impact Assessment Regulations

Also related to the protection of groundwater from a development planning perspective are the 2001 Environment Impact Assessment Regulations which transpose the Directive 85/337 as amended by 2003/35/EC on Environment Impact Assessments.

The competent authority is MEPA which requires an Environment Planning Statement for prospecting and extracting groundwater but only when the quantity of water extracted is more than 10 million cubic metres.

The directive has not yet been transposed under Maltese law but the competent authority will be MEPA which will be responsible for deciding whether an SEA is required for any plans and programmes made by a public entity with respect to water management.

8. Cost Recovery for Groundwater Use

The notion for cost recovery for groundwater use and abstraction is rather recent. Actually, it is still the general perception that use of the water extracted from a well¹²⁹ known in common parlance in Maltese as “*spiera*” is an intrinsic right pertaining to the enjoyment of one’s property. The existence of such ‘wells’ is often advertised when tenements are put for sale, as an added bonus which increases the value of the property. In fact, extracting groundwater from a “*spiera*” and selling it at commercial rates for filling swimming pools and watering gardens and even topping up cisterns, is common practice and is not perceived to be illegal.

In actual fact, after the repeal of the Irrigation Ordinance and the Underground Water Ordinance, there are no longer any laws which specifically prohibit extraction of groundwater with or without permits, although there are enabling laws that could be used to issue subsidiary legislation on these lines. Illegality arises only if a person steals groundwater from a well, bore-hole or shaft which does not belong to him, but obviously regulation of use and abstraction of groundwater by owners of the tenements where it is located is not only legal but also, nowadays, a very lucrative business.

¹²⁹ As used to be defined in the Underground Water Ordinance, that is, “*any surface made in the ground... from which underground water is obtained, or for the purpose of obtaining ground water*”.

Furthermore, as “*groundwater*” has never been appropriated by the government, even though recent legal instruments regulate abstraction and use of groundwater rather stringently, any prohibition or restriction of groundwater use by property owners in the past, has not only failed to address cost recovery, but on the contrary, provided for the owners right, to qualify for compensation. Again it is useful to take a look at the legal history of regulating cost recovery for groundwater abstraction to understand better the public perception or rather the lack of it, on the subject.

In fact, as already explained rather than cost recovery, compensation was paid under the Water Pumps Ordinance, for expenses incurred as a result of the regulatory conditions imposed. Shortly afterwards, probably due to political pressure however, this Ordinance was amended by Ordinance XIII entitled Water Pumps (Amendment) Ordinance¹³⁰. The Amending Ordinance introduced compensation with respect to loss or damage, “*directly attributable*”, to the prohibition or restriction of the use of any water pump. Compensation was introduced, “*in respect of injury to growing crops directly caused by the prohibition of the use of the pump*”. Therefore besides compensation for expenses incurred as a result of installing pumps, whose use was now prohibited, this amendment went a step ahead and provided compensation for damages, “*directly caused*” – what is known at law as compensation for “*dannum emergens*”.

The Amending Ordinance¹³¹ goes one step further and also provides for compensation for loss of profits, if the pump is prohibited for the use of irrigation of any land. This type of compensation is wider and goes beyond compensation “*dannum emergens*” as it provides for compensation of “*lucrum cessans*” i.e. loss of profits which is more difficult to prove and to calculate and which would definitely be much higher than compensation, “*dannum emergens*”.

The Underground Water Ordinance of 1943 as subsequently amended, was enacted to repeal and replace the Water Pumps Ordinance.

The provisions relating to compensation were restricted, when compared to those of the Water Pumps Ordinance, but still there was no mention, let alone an obligation for cost recovery. In fact, compensation for the prohibition of the use of water pumps and the respective well, was only applicable with respect to, “*actual loss or damage directly attributable to*”. In other words there was no reference to loss of profits for such prohibition or restriction of the use of any water pump or the enlargement, modification or blocking of existing well, upon the instructions of the Water Board. Compensation was not paid in the case of prohibiting, the making of new wells or the modification of existing ones in Water Controlled Areas. Compensation may have been limitedly awarded for expenses incurred for works already commenced. No only did these Ordinance fail to provide for cost recovery but instead, they awarded compensation for restriction and prohibition of use of groundwater.

Cost recovery was however introduced under the Irrigation Ordinance in 1939. Under this Ordinance, the Minister responsible for Agriculture could declare areas to be

¹³⁰ This Ordinance repealed the enabling powers established under Section 8 and Section 9 of the principal Ordinance which referred to compensation.

¹³¹ Ordinance XIII, Section 3 (5) (c) (1)

designated as “*Irrigation Areas*”. In turn, the Manager of the Department of Water Works which was the competent authority for the provision of a water supply at the time, had to provide adequate supplies of water to be made available against payment for the irrigation of land in an irrigation area. Rates of payment for water drawn were to be remitted or reduced for various reasons listed in the Ordinance. The Irrigation Ordinance was to consider any application made to it by the owner of a tenement, claiming for a supply of water and estimate the rate of payment for the adequate supply of water to be drawn by the owner of the tenement.¹³²

When these Ordinances were repealed, they were replaced by the Water Services Corporation Act, an enabling act which gave the Minister responsible for water, the power to issue subsidiary legislation to regulate abstraction and use of groundwater against payment, but this subsidiary legislation was never published. The Malta Resources Authority Act was adopted in the year 2000 and the regulator’s role was assumed by the Malta Resources Authority, which also gave the Minister responsible for Resources the power to issue subsidiary legislation to regulate abstraction and use of groundwater against the recovery of costs, but to date, no legislation has been published.

At this point in time, the situation is pitiful. Not only do we have a situation where costs are not being recovered for use and abstraction of groundwater by owners of tenements with wells, but also, there is rampant over abstraction of groundwater which is illegal but because of the lack of subsidiary legislation, unenforceable. The Regulations Establishing a Framework of Action in the Field of Water Policy, oblige the competent authority to take account of the principle of the necessary costs of water services, “*including environmental and resource costs*”. Annex III lays down the parameters within which an economic analysis is to be conducted and which the competent authority must also take into consideration. The competent authority that is the Malta Resources Authority must put into effect the recovery of the costs above mentioned by 2010, by implementing these costs it may also have regard to the social, environmental and economic effects of the recovery and the geographic and climatic conditions of the regions affected.

These regulations do not prohibit the funding of preventive or remedial measures to achieve the objectives set therein.¹³³, if the recovery of costs for water services are not applied and this situation does not “*compromise the purpose and the achievement of the objectives of these regulations*”. The competent authority shall not be in breach of these regulations but it is legally bound to report why it has opted not to do so, in the water catchment management plans.

In fact, in establishing the programme of measures for each water catchment district, the Malta Resources Authority must take a number of “*basic measures*” as minimum requirements to be complied with. Amongst the measures imposed by law under these same regulations, there are “*measures deemed appropriate for the purposes of recovery of cost of water services*”.

¹³² Adequate supply of water under the Irrigation Ordinance was considered as such, if the water obtainable was, “as is necessary for the cultivation of any field”.

¹³³ Article 9 (3).

Both the Minister for Resources under the Malta Resources Authority Act has enabling powers to provide for cost recovery measures, similarly the Minister for the Environment under the Environment Protection Act.

9. Groundwater Management and Development Planning

Development planning in Malta was seriously regulated for the first time with the enactment of the of the Development Planning Act¹³⁴.

When a person wishes to develop land he or she may apply to MEPA to determine whether a proposal constitutes development and therefore whether it requires a development permission. There are “*development*” operations for which the MEPA does not require a full application for a development permit, but only a Development Notification Order. The sinking of “*wells*” does not constitute “*development*” and there is no requirement to apply for a permit. Here “*wells*” however is probably referring to the sinking of “*cisterns*” rather than wells from which groundwater is extracted. The term “*cistern*” and “*well*” are often used interchangeably especially as the term “*well*” in Maltese is loosely translated as “*bir*” – which in Maltese refers to a cistern for storing surface water derived from rainfall from roof tops.

A well for extracting groundwater in every day jargon is referred to as a “*borehole*”. Development on any land for drilling a “*borehole*”, in fact requires a Development Notification Order. Permit is not granted if this is drilled within 50 metres of residential or other non-commercial building, within “*designated areas*” and in the vicinity of scheduled property, otherwise it is permitted.

Apart from the need to apply for a development permit, the regulations on Environment Impact Assessments¹³⁵ under the Development Planning Act¹³⁶ require an Environment Planning Statement¹³⁷ whenever there is an artificial recharge into the aquifer, or abstraction of groundwater exceeds an annual volume of 10 million cubic metres. MEPA is responsible for ensuring that in such cases the operators carry out an Environment Planning Statement that will address any negative impacts on the environment and the resource itself are prevented or rectified.

The term “*designated areas*” must now be interpreted in the light of the meaning this new term has achieved by virtue of the Flora, Fauna and Natural Habitats Protection Regulations. These areas of “*natural importance*” are the same designated areas referred to here. The Flora, Fauna and Natural Habitats Protection Regulations are rather recent, but they have further qualified development permits’ requirements, when it comes to prospecting for and abstraction of groundwater in these “*designated areas*”. Having said that however, the Habitats Regulations, require the formulation of management plans for these designated areas which in turn would include the legal and administrative measures that must be adopted to safeguard bodies groundwater bodies located in these, “*designated areas of special importance*”.

¹³⁴ Chapter 356 of the Laws of Malta.

¹³⁵ LN 204/2001

¹³⁶ Chapter 356 of the Laws of Malta

¹³⁷ LN 204/2001 Schedule 1 Section 5.4

Furthermore, the provisions of the Draft Regulations on the Establishment of An Action Plan in the Field of Water Policy, require the Malta Resources Authority to take the necessary basic measures to protect the bodies of groundwater and assign them if they are not already within one, into a water catchment district, so as to prevent the deterioration of the status of the bodies of groundwater.

These include not only bodies of groundwater used for human consumption but also those used for any other purpose, including agriculture.

Therefore close coordination between the Malta Resources Authority and MEPA is required in order to ensure effective and smooth implementation of these various legal sources of subsidiary legislation.

More recently the draft regulations on Strategic Environment Assessment which transpose EU Directive 2001/42/EC on the Assessment of certain plans and programmes of the Environment, require any public agency to submit a Strategic Environment Impact Assessment (SEA) on any plans or programmes relating to Water Management.

The SEA Directive as transposed into the draft regulations applies to plans and programmes which:

- fall within the following sectors:- agriculture, forestry, fisheries, energy, industry, transport, waste management, water management, telecommunications, tourism, town and country planning or land use
- set the framework for future development consent of projects listed in LN 204/2001 on Environmental Impact Assessment or require assessment under LN 257/2003 on Flora, Fauna and Natural Habitats Protection
- the first formal preparatory act is subsequent to the 21st July 2004¹³⁸
- are subject to preparation and/or adoption by an authority at national, regional or local level or which are prepared by an authority for adoption, through a legislative procedure by Parliament or Government
- are required by legislative, regulatory or administrative provisions. The Directive 2001/42/EC does not explicitly define *administrative provisions*; there are defined in the draft regulations as “*formal requirements for ensuring that action is taken; such requirements do not necessarily have the full force of law, and include requirements made in a statutory plan*”.

MEPA is proposed as the competent (regulatory) authority under these draft regulations. As such, MEPA would be responsible for the overall coordination of the process, reviewing the environmental report, ensuring the quality control regime

¹³⁸ plans and programmes of which the first formal preparatory act is before that date and which are adopted or submitted to the legislative procedure after the 21st July 2006, shall be made subject to environmental assessment unless the competent authority decides on a case by case basis that this is not feasible and inform the public of its decision.

required by the LN, preparing guidance documents and reporting to the EU Commission. There are resource implications on MEPA, depending on the number of plans that would require to be subjected to an SEA.

Abstraction, Use and Recharge of Groundwater would therefore become subject to an SEA. This is certainly a remarkable step ahead in the right direction which ensures the maintenance of a good quality status for all bodies of ground water.

10. Public Participation

The process of public participation with respect to the use of groundwater is rather recent and currently only available under the Environment Protection Act and the Development Planning Act.

Under the Environment Protection Act the Minister is legally obliged to publish any regulations in draft form for public consultation.

In fact the Act states that regulations by the Minister after consultation with the MEPA, *“shall not be made unless the Minister shall have first published a draft thereof in the Gazette allowing a period of at least four weeks to make representations to the Minister or to the Authority or to both”*.

“Any person” can make representations, which means that such person which can be both actual and legal need not have a *“direct interest”*. The parameters for making such representation are very wide. The person making them must state *“how in his opinion, the proposed regulations do not sufficiently protect the environment, or how they are too unnecessarily restrictive or cause him hardship or economic loss and ask for a revision of such draft”*.

This means that if draft regulations to protect groundwater were issued under the Environment Protection Act, the public can make representations to the Minister both in favour and against the conservation of the resource. Although it is usual for environmental non-governmental organizations to make representations pro-conservation it must be said that in Malta, it is not usually common practice for citizens to intervene and make representations in favour of conservation. On the contrary people who would be affected by the proposed regulations are likely to put a lot of political pressure on the Minister to review the draft regulations because of the *“hardship”* or *“economic losses”* they would sustain, if the regulations proposed come into force. Although now, certain conservation targets and thresholds will be part of the *acquis communautaire* and hence require transposition, it must be borne in mind that past experience (albeit not with respect to groundwater management) shows that public participation, has done as much harm as it has done good in Malta. In other words although public participation is an essential tool in formulating environmental law and policy, it certainly cannot be assumed that public participation will automatically constrain the Minister or government to take more stringent measures to conserve groundwater resources, especially as public perception with respect to the legal status of this resource is, that it is essentially subject to private ownership.

There are exceptions under the Environment Protection Act when the Minister is not constrained to issue draft regulations for public consultation. In the light of the arguments above, these exceptions may prove to be an invaluable asset to ensure that use and abstraction of groundwater does not prejudice its good conservation status. These exceptions are, when regulations or parts thereof:

- Provide for the procedure to be applied in the application for licences under the Environment Protection act.
- Provide for fees chargeable therefore,
- Provide for general conditions under which the Authority may require the giving of financial guarantees.
- The provision of assurance to make good for any damage that may be caused to the environment by any activity which may require a licence under this Act.

Furthermore the Minister has the discretion to issue regulations which do not allow for the four week time period of public consultation, prior to publication if he considers that the regulations in question are urgent. The Minister however is then obliged by law to allow a period of 6 weeks public consultation period for any person “to make submissions to the Minister and or to the Authority (MEPA) stating why and how the regulations should be revoked or amended”, after the regulations are published.

In any case MEPA shall report to the Minister any representations made to it. MEPA is legally obliged to “hear such persons or take such expert advice as it considers expedient “before reporting to the Minister”. The Minister shall then consider the report and any representations made directly to him. He may revise and amend the draft regulations or the regulations already in force, in case regulations are urgent as above-mentioned. The Minister however has the discretion not to amend them.

Under the Regulations establishing a Framework of Action for Water Policy, the Malta Resources Authority and MEPA are the competent authorities must ensure that the public is consulted and informed. These regulations, in accordance with the procedure established under the Environment Protection Act, have been published in draft form giving “any person” the right to make any submission for or against the draft regulations. The regulations however also oblige the competent authority to “encourage” the active involvement of “interested parties”, in the implementation of these regulations, particularly in relation to the formulation, review and updating of the water catchment plans. The regulations stipulate a period of at least six months to receive comments in writing from “interested parties”, in order to allow active involvement and consultation.

The Developing Planning Act provides for public participation when summoning public hearings for development projects. The draft regulations which transpose the directive on the Strategic Environment Assessment require the participation of the public in all the phases for drawing up the scoping report and the preparation of the environment report in line with the obligations under the Aarhus Convention on Public Participation and Access to Justice in Environmental Matters.

11. Monitoring, Licensing and the Keeping of Registers.

The earliest form of monitoring for use and extraction of underground water can be found in Code of Police Laws where the taking of “*public water not provided for gratuitous use of the public*”¹³⁹, could only be done upon obtaining the permission of the “*officer in charge of distribution of public waters*”¹⁴⁰.

In 1938 the objective of the Water Pumps Ordinance, was the registration of all water pumps in order to prohibit or restrict their use in water Conservation Areas such that no pumps without a licence could be used in these Areas. This was certainly a step in the right direction as it provided the government at the time, with an inventory of all water pumps in use and the possibility to monitor extraction of ground water, particularly in Water Conservation Areas.

When in 1943 the Underground Water Ordinance was enacted to repeal and replace the 1938 Water Pumps Ordinance the control of extraction was tightened even further by requiring a licence for the importation, manufacture, buying, acquisition, sale, disposal, possession, control of water pumps.

The Underground Water Ordinance ensured that a licensing system would provide authorities with an inventory of all water pumps in Malta. Apart from licensing water pumps, this Ordinance introduced an obligation for requiring a licence to:

- Sink a well or extend it in a Water Controlled Area.
- Install or add a water pump for drawing water from a well in a Water Controlled Area.
- Maintain a well in workable condition in a Water Controlled Area.

To some extent even the Irrigation Ordinance provided for monitoring extraction because it was the Irrigation Board which determined the “*adequate supply of water*” that had to be made available in “*irrigation areas*”. Furthermore such supply of water was provided “*against payment*”. Although not metered, there must have been a rough estimation as to the volume of water that was to be extracted. So much so, the Irrigation Ordinance stipulated that the Manager of the Water Works Department, had the right to enter into any land whether designated as an Irrigation Area or not, to inspect and maintain the water supply system amongst other rights. It was an offence to interfere with or damage any works connected with the irrigation water supply system. This meant that the Water Works Department must have monitored for any abuse of the right to extract, beyond the limit allocated by the Irrigation Board which was being paid for.

Apart from the licensing of water pumps, this Ordinance required a licence for the sinking of wells, boreholes or trenches in irrigation areas when these were used to

¹³⁹ Part VII Chapter 10, Laws of Malta.

¹⁴⁰ Section 148, Part VII, Code of Police Laws Chapter 10 of the Laws of Malta.

obtain underground water. So at that time there were two different Boards from which a licence had to be obtained for extracting ground water. Under the Underground Water Ordinance, a licence from the Water Board was necessary for extracting ground water in Water Conservation Areas whilst under the Irrigation Ordinance, a licence from the Irrigation Board was necessary for extracting groundwater in Irrigation Areas.

After the repeal of these Ordinances by the Water Services Corporation Act, no regulations were issued obliging any person to register water pumps or to sink wells in Water Conservation Areas or Irrigation Areas, although the enabling provisions enabled the Minister responsible for water resources to issue them. The registration practice persisted, despite the absence of the legal instruments particularly because the Water Services Corporation Act gave the Corporation the mandate to encourage the conservation of water resources, *“to the extent that it is so authorised to do, survey any land, to inspect any well and to cause the sinking of bores or other works for the purpose of ascertaining the nature of the subsoil or the presence, quality or quantity of underground water in it and to cause the sinking of shafts and the driving of subterranean galleries”*¹⁴¹.

The Malta Resources Authority Act¹⁴² deleted the provisions under the Water Services Corporation Act which empowered the Water Services Corporation to issue licences for the supply and sale and other functions concerning waters, water pumps and other apparatus related to the supply of water. Such an amendment was necessary to divest the Water Services Corporation from the power to issue licences, as such a power pertains to the regulator, which role now pertains to Malta Resources Authority.

Under the Malta Resources Authority Act, it is specifically stated that no person shall carry out any activity or operation (or be so engaged) with respect to water, unless such person is in possession of a licence, permit or other authorization of the Malta Resources Authority. This provision enables Malta Resources Authority to monitor all operations relating to the abstraction and use of ground water by licensing such operations. This is in keeping with the Authority’s primary function *“to secure and regulate the conservation ... of water resources and sources of water supply”*. The licensing provision above-mentioned, offers sufficient *vires* for Malta Resources Authority to monitor, via licensing procedures but to supplement this general provision, the Act gives the Minister certain powers. The enabling provisions enable the Minister to issue regulations to provide amongst other things for licensing procedures to secure adequate reserves and to set minimum standards relating to the management of water.

In fact the Minister for Resources has issued the regulations for the Protection of Ground Water Against Pollution caused by Dangerous Substances, by virtue of the Malta Resources Authority Act, 2000 which establish the Malta Resources Authority as the competent authority responsible for monitoring pollution caused by anthropogenic direct and indirect discharges into ground water.

¹⁴¹ Chapter 355 of the Laws of Malta.

¹⁴² Chapter 423 of the Laws of Malta.

The Malta Resources Authority as the competent authority, shall subject to “*prior investigation any person who for the purpose of disposing of these substances the discharge of which is prohibited as above mentioned, disposes of or tips them in a manner which might lead to indirect discharge*”. The Malta Resources Authority shall either prohibit any such disposal or tipping, or grant its authorization once it ensures that all the necessary technical precautions “*to prevent such discharge are observed*”¹⁴³.

The Malta Resources Authority therefore is legally bound to adopt a preventive approach and cannot grant its authorization if such discharge cannot be prevented. Similarly the Malta Resources Authority is empowered to, “*take all appropriate measures it deems necessary, to prevent any indirect discharge of substances in list I*”, which may occur due to other activities, “*on or in the ground*”¹⁴⁴. The Malta Resources Authority may still authorize in such cases, the discharge of substances in list I if “*prior investigations*”, reveal that these substances will be discharged into groundwater considered to be, “*permanently unsuitable for other uses, especially domestic or agricultural*”, purposes but to do so it must ensure that, “*their presence does not impede exploitation of ground resources*”, and that “*all technical precautions have been taken to ensure that these substances cannot reach other aquatic systems or harm other ecosystems*”¹⁴⁵.

The Malta Resources Authority may also authorize, “*after prior investigation*”, discharges due to re-injection into the same aquifer of water used for geothermal purposes, water pumped out of mines and quarries or water pumped out for civil engineering works. The Malta Resources Authority may subsequently decide to grant an authorization for these types of discharges but, “*all technical precautions for preventing groundwater pollution by these substances*”, have to be observed. The Malta Resources Authority shall take all the measures it deems to be appropriately necessary, “*to limit all indirect discharges of substances in list II*”, which result from any other “*activities on or in the ground*”. The regulations provide for a “*special authorisation*” from the Malta Resources Authority “*on a case-by-case basis*”. With respect to “*artificial recharges for the purpose of groundwater management*”, such a special authorization may only be granted, “*if there is no risk of polluting the ground water*”.

The regulations continue to specify that the “*prior investigations*”, referred to as a precondition before authorizations may be issued by the MRA: “*shall include examination of the hydrogeological conditions of the area concerned, the possible purifying powers of the soil and subsoil and the risk of pollution and alteration of the quality of the groundwater from the discharge and shall establish whether the discharge of substances into groundwater is a satisfactory solution from the point of view of the environment*”.

Apart from “*prior investigations*”, the authorizations above-mentioned shall not be issued by the Malta Resources Authority before the groundwater “*especially its quality*”, undergoes the “*requisite surveillance*”. The regulations do not specify in

¹⁴³ LN203/2002 Article 4 (2) (b).

¹⁴⁴ Ibid.

¹⁴⁵ Ibid.

legal terms what is meant by “*requisite surveillance*”¹⁴⁶. The Authority therefore is not bound by law as to what constitutes “*requisite surveillance*”. The methodology employed, is left to the Malta Resources Authority’s discretion.

On the contrary, under these regulations, the Malta Resources Authority is legally obliged to specify in its authorization both for direct and indirect discharges, certain conditions which render monitoring easier and thereby ensuring compliance. In the case of direct discharges for example, the Malta Resources Authority’s authorization must specify the arrangements enabling effluents discharged into groundwater to be monitored and where necessary, establish the measures for monitoring ground water and in particular its quality. For indirect discharges authorizations must specify the measures to be taken by the operators, for monitoring the groundwater in particular its quality. Having mentioned these examples, one must specify that all conditions listed in these authorizations as required by law, aim at better monitoring.

Furthermore the Malta Resources Authority is obliged to hold an inventory of all the authorizations it grants, by virtue of these regulations, as well as of the discharges of substances listed in the Schedules I and II to these regulations¹⁴⁷.

Under the Environment Protection Act, the Minister may issue regulations to prescribe techniques to be used in monitoring the environment, to establish systems which ensure prevention and control of pollution in the environment, to prescribe measures to control, prevent, manage or reduce pollution and degradation of the environment as well as establish methodologies to be used in the monitoring of discharge and emissions of substances and, or energy into the environment and to regulate the use of information gathered during such monitoring. Furthermore MEPA can under the Act, prohibit any person from carrying out any activities which lead to discharge of substances or energy into the environment, unless it holds a licence from the Authority. This provision is used to include licensing procedures in regulations issued under the Environment Protection Act by the Minister for the Environment.

In fact the 2004 Regulations Establishing a Framework of Action in the Field of Water Policy were issued by virtue of the enabling provisions of both the Environment Protection Act and the Malta Resources Authority Act, as well as the power of MEPA and MRA to issue licences accordingly.

The Malta Resources Authority as the competent authority, shall by the end of November 2004, also hold a register or registers for all areas lying within each water catchment district which have been designated as requiring special protection under specific legislation, for the conservation of groundwater. These registers shall include all bodies of ground water identified above.

In order to establish a coherent and comprehensive overview of the water status, within each catchment district the Malta Resources Authority as the competent authority shall by the end of November 2006 establish monitoring programmes for groundwater, which shall cover the monitoring of their chemical and quantitative

¹⁴⁶ LN203/2002 Article 8.

¹⁴⁷ LN 203/2002 Article 15.

status. Monitoring will be carried out in accordance with Annex V of the regulations and to technical specifications and standardised methods.

In the programme of measures which the Malta Resources Authority must establish under these regulations, it shall include a number of basic measures which are the minimum requirements to be complied with and these include controls over the abstraction of groundwater, including a register or registers of water abstractions and a requirement of prior authorisation for abstraction. These controls shall be periodically reviewed and, where necessary, updated. A requirement for prior authorisation of artificial recharge or augmentation of groundwater bodies.

When it becomes apparent through monitoring and other data that environment objectives set under these regulations will not be met, for a particular body of ground water, it is the Malta Resources Authority's duty as the competent authority, to investigate the causes for such a failure and to examine and review relevant permits and monitoring programmes.

12. Liability and Enforcement

12.1 Liability

The provisions of the civil code regulating ownership rights over groundwater resources give rise to civil liability if breached. Regulation of the use of groundwater referred to as “*public waters*” under the Code of Police Laws gives rise to a contravention and is therefore regulated by the Criminal Code. According to the Criminal Code¹⁴⁸, the punishments that may be awarded for contraventions are:

(a) *Detention*¹⁴⁹

(b) *Fine*¹⁵⁰

(c) *Reprimand or admonition*

The repealed ordinances¹⁵¹ attributed criminal liability for any person who is found guilty of breaching the provisions of the Ordinances and the conditions stipulated under the licences issued by virtue of the provisions of the Ordinance themselves.

Any person who failed to comply with any of the provisions of the Underground Water Ordinance for example, or any of the conditions stipulated in any licence or permit issues by virtue of this Ordinance, was liable upon conviction before the Inferior Criminal Courts to a fine not exceeding one hundred Maltese liri or to imprisonment for a term not exceeding three months or to both such fine or imprisonment. Under the Irrigation Ordinance offences were punishable upon

¹⁴⁸ Chapter 9 Section 7 (2) of the Laws of Malta.

¹⁴⁹ According to Section 12 (3) of the Criminal Code “No term of detention shall exceed one month”.

¹⁵⁰ According to Section 13 (1) the maximum of a fine (ammenda) is twenty five liri and the minimum is three liri.

¹⁵¹ The Irrigation Ordinance, the Water Pumps Ordinance and the Underground Water Ordinance.

conviction to imprisonment for a term not exceeding one month or to a fine not exceeding twenty Maltese liri (47 Euros).

The Malta Resources Authority Act allows for criminal punishment in the form of a maximum penalty of one thousand Maltese liri (2340 Euros) or up to 6 months imprisonment or to both. Any regulations issued under the Act may include provisions which provide for criminal liability, if there is a breach of the provisions of the regulations, or the conditions stipulated under any authorizations made thereunder.

The Environment Protection Act provides for the prescription of criminal punishments even under any regulations issued under it, which may constitute a fine that cannot be higher than one thousand liri (2340 Euros) and, or to imprisonment for a term not exceeding two years. The Environment Protection Act also prescribes criminal punishments for the breaching of any conditions laid down in licences issued by virtue of the enabling licensing provisions under the Act.

Operating without a licence or breaching conditions shall under the Environment Protection Act and any regulations issued thereunder shall upon conviction lead to criminal liability in the form of a fine of not more than twenty five thousand liri (585,000 Euros) or to imprisonment for a term not exceeding six months, or to both such fine and imprisonment.

Apart from criminal liability and the action for civil damages for any offences against the provisions of the Environment Protection Act and its subsidiary legislation, an action for environmental damages can be instituted by the Chair of the Environment Fund. Environmental damages are awarded apart from any civil damages incurred or for loss of profits, but for the degradation of the environment *per se* and hence they can even be awarded for ground water, if damages are caused to the resource.

The Chairman of the Fund, may thus be in a position to make an action for environmental damages against any person and hence even Malta Resources Authority, Water Services Corporation and the Government for example, if these entities are responsible through their negligence or non-performance of their duties to safeguard ground water from degradation.

12.2 Enforcement and Compliance

The various legal sources regulating ground water have always entrusted the institution with the regulation of groundwater to monitor compliance but enforcement was always left in the hands of the Executive Police.

Under the Code of Police Laws it was the officer in charge of the distribution of public waters who was responsible for any mismanagement, pollution and taking of groundwater (public waters) without a permit. The Executive Police were then the people who had the juridical competence to prosecute offences before the Inferior Criminal Court.

Under the Water Pumps Ordinance and later on the Under Ground Water Ordinance, it was the Executive Police who prosecuted offenders but it was the Water Works Department which monitored compliance and the Manager of the Water Work

Department. The manager had the power to enter, survey and inspect any land and any well, in order to maintain or improve the water supply of Malta and the hindrance or obstruction or tampering with any works executed by himself was tantamount to an offence under the Ordinance.

Similarly under the Irrigation Ordinance, the Manager of the Water Works Department had the right to enter on any land, (whether designated as an irrigation area or not) to carry out all the necessary works to provide water for the irrigation area, to test, inspect and maintain the water supply system and to repair any breakages or defects which could have ensued.

Under the Malta Resources Authority Act authorised officers of the Authority, may enter any premises in which any *“collecting area, spring, well, borehole, water course gallery, cistern, conduit or any water, sewer, waste water, fittings or service, apparatus, installation instrument, plant or accessories are constructed, land or installed for the manufacture, desalination, treatment, polishing, provision, storage, distribution of water for the purpose of ... ascertaining whether there be any waste of resources or anything contrary to the provisions of this Act, its regulations and licences, permits, authorisations issued hereunder”*¹⁵².

Even for offences under the Malta Resources Act and subsidiary legislation issued thereunder, however, it is the Executive Police who are competent for prosecuting offences.

Under the Environment Protection Act, the Authority is the regulator which is responsible for monitoring but contrary to all the other institutions, its inspectorate may also prosecute offenders. Environment inspectors have also executive powers to:

- (a) enter any premises (other than a dwelling) or board any vehicle or vessel licensed under this Act, or as may otherwise be prescribed;
- (b) examine any article to which any regulations under this act may apply and take samples as it may deem fit for examination;
- (c) make plans of any premises, vehicle or vessel and take photographs of the same after entry or boarding in accordance with paragraph (a) hereof;
- (d) enquire from any person information in connection with any activity or other matter regulated by this Act;
- (e) issue stop orders to any person not in compliance with this Act or with any regulation made thereunder.

Environment inspectors have these powers with respect to all regulations published by virtue of the Environment Protection Act.

It is very telling that whilst conducting my research, no cases were found relating to illegal abstraction, pollution and degradation of groundwater. Despite the legal

¹⁵² Section 30.

sources which provide the necessary tools to do so, compliance in general and enforcement in particular, are not being affected.

DRAFT

PART TWO: GAPS & HARMONIZATION WITH THE *ACQUIS COMMUNAUTAIRE*

DRAFT

Part Two

1. Existing Gaps and Weaknesses in Maltese Legislation relating to Groundwater.

1.1 The Legal Status of Groundwater, Regulating Prospecting and Extraction of Groundwater and the Well-Drilling Trade.

Private ownership of groundwater, under the provisions of the Civil Code has now been subjected to extensive regulation, particularly as a result of the coming into force of several pieces of primary and subsidiary legislation harmonizing Malta's laws with those of the "*acquis communautaire*" relating to groundwater.

Government regulation therefore has served to qualify at least from a legal perspective, "*this unrestricted right of use*" of groundwater by private land owners, with the result that the status of private ownership of groundwater established under the Civil Code has been encroached upon by more recent and specific legal obligations found under the various legal sources, which address the protection of groundwater by regulating both quantity and quality management of the resource.

Contrary to the repealed legal sources, namely the Underground Water Ordinance, the Water Pumps Ordinance and the Irrigation Ordinance, the Malta Resources Authority Act and the Environment Protection Act do not merely provide "*end-of-pipe*" solutions and are not limited only to regulate the "*quantity*" of water abstracted for use. On the contrary they adopt a rather comprehensive and preventive approach and have enabled the publication of subsidiary legislation which sets thresholds to avoid degradation of the resource as a result of mis-use. By establishing strict licensing requirements, subsidiary legislation is in a position to regulate operations by setting measures that prevent groundwater depletion and eliminate the risk of impairing a good groundwater status. In this case the Draft Regulations Establishing a Framework in the Field of Water Management, have definitely filled in a gap which previously existed under Maltese law and introduced a regime which provides Malta with a legal framework that guarantees sustainable use of the resource.

Having said this however, a serious lacuna persists which does not allow the enforcement of illegal abstraction of groundwater. Despite the enabling provisions of the Environment Protection Act and the Malta Resources Authority Act, no subsidiary legislation has been issued to licence and control abstraction of groundwater. Coupled with the public perception that the right of use of groundwater located under one's tenement is unrestricted, practically any person who is the owner of a tenement can abstract groundwater. Despite the complex subsidiary legislation requiring a good groundwater status transposing the Water Framework Directive, therefore unless this lacuna is filled as soon as possible, the resources of groundwater on the Maltese islands would continue to be highly at risk.

It is rather unfortunate that certain useful administrative practices like the registration of wells, water pumps and similar apparatus, which persisted for sometime, even after

the legal obligations requiring them were repealed, are no longer observed. Even if these administrative practice were remedial and end-of-pipe solutions, they were still better than the obtaining “*free-for-all*” situation, that exists today.

Equally unregulated is the well-drilling trade. The enabling provisions to issue regulations regulating well-drilling trade exist under the Malta Resources Authority Act, which also requires a license for well-drilling operations. There has also been no attempt whatsoever to compile an inventory of well-drilling apparatus, as there has been for example with water-pumps, both under the groundwater Ordinance and under the Water Pumps Ordinance.

1.2 Groundwater Administration

The responsibility to conserve groundwater as a resource and to maintain its good status is in the hands of the Malta Resources Authority. The Authority, which is an autonomous body with a separate juridical personality, has not yet fully exploited its regulatory powers under the Act, because various enabling provisions which permit the Minister to issue subsidiary legislation, have not been utilized. The Authority is still finding its feet, which is understandable since it was set up only four years ago. Hence it does not as yet have a fully fledged licensing and effective enforcement system. The Authority needs to put pressure on the Minister for Resources, to fill in certain lacunae immediately, particularly those relating to the control of the sinking of wells and the illegal abstraction and use. The administrative practices which need to accompany the legal framework introduced as a result of the harmonization process between the *acquis communautaire* and Maltese law, cannot be established overnight. Any administrative measures taken, must seek to secure compliance rather than seeking regulation via enforcement. Enforcement although essential, must always be the ultimate solution. Administrative measures securing compliance will lead to a change in culture more readily. Generally speaking, except for the draft regulations establishing a Framework for Action on Water Policy, the law does not delineate the separate roles of the Malta Resources Authority and MEPA. It is not Maltese legal practice to give administrative arrangements the force of law, so this delineation is being drawn up in a Memorandum of Understanding.

This is because, MEPA is the competent authority under the vast majority of legal instruments regulating pollution from diffuse sources. MEPA and the Malta Resources Authority have to work together to set conditions for permits to be issued by one authority or the other, this would secure cooperation between the two entities. The Memorandum of Understanding therefore, must specify precisely which Authority should take the lead before the licensing of various operations and how it would specifically seek to inform the other Authority to include the necessary thresholds to secure a good status for groundwater.

Users and operators should be able to work in a one stop shop system, where conditions and requirements to obtain a licence are clear and as far as possible uniform, where there is no shunning of responsibility by one Authority in favour of another but clear terms of reference as to which Authority is responsible for which operation.

The role of the other public entities like the Department of Public Health and the Water Services corporation also requires strict cooperation with MEPA and the Malta Resources Authority. The National Commission for Sustainable Development should assess the current practices with respect to the use of groundwater, as to whether such practices are in fact sustainable. The Commission should build consensus or any action required to achieve further progress and identify the trends, processes or policies which are undermining the sustainable use of groundwater, recommending action to reverse such trends or proposing alternative processes and policies. Above all the Commission must encourage and stimulate good practice in the use and management of groundwater, identifying the sustainability indicators which would serve as benchmarks to ensure that only if these indicators are respected, would groundwater use, be sustainable.

1.3 Charging for Groundwater Abstraction and Use/Cost Recovery

The tariffs paid by each household for the water supply, cannot be classified as cost recovery measures for groundwater abstraction. This is because the household water supply is not only derived from the abstraction of groundwater but also from desalination plants and surface waters collected from rainfall in large public water cisterns. Furthermore, the tariffs themselves, do not, according to the Water Services Corporation, cover the costs of water production, whichever the sources of supply.

The only instance when there was some form of cost recovery for groundwater abstraction was under the Irrigation Ordinance when access to groundwater for irrigation purposes was provided and paid for. Even if groundwater consumption was not metered it was still a better situation than the obtaining position after the repeal of the Irrigation Ordinance.

There is a serious lacuna in the law because the Minister for Resources has not issued regulations under the Malta Resources Authority Act, which set the cost recovery measures, despite the enabling provisions under the Act.

The Regulations Establishing a Framework of Action for Water Policy which transpose the Water Framework Directive include the legal obligation to recover costs for the production of water. Although this obligation can be waived if cost recovery measures have negative socio-economic impacts.

Although it is true that that metering the use of groundwater to be able to implement cost recovery, would bring about socio-economic repercussions particularly within the agricultural sector, such cost recovery measures could be introduced over a span of time to enable affected parties to adjust and seek alternative sources of water.

What is especially astounding is the rampant abuse of the “free” access to the resource which is not only used for agricultural purposes as required, but sold at a profit. It is essential that such practices are immediately curbed through the introduction of severe penalties put via subsidiary legislation, for such illegal operations.

1.4 Groundwater Management and Development Planning

The obtaining position will in the near future be subject to better regulation a result of the Strategic Environmental Assessment regulations which transpose the EU Directive 2001/42/EC on the Assessment of the Effects of Certain Plans and Programmes on the Environment. These regulations will come into effect on the 21st July 2004. Water management plans and programmes by public entities will now be subject to a Strategic Environment Assessment. This includes both the Water Services Corporation and the Malta Resources Authority. One cannot at this point assess if there are any weaknesses or gaps in the draft legislation as it can only put to test once it starts being applied. Having said that however the wording of the directive itself leaves a lot of leeway and it is still possible not to subject such water management plans to a Strategic Environment Assessment (SEA) because the said plans may not be “*subject to preparation/and or adoption by a public entity at national, regional or local level or prepared by a public entity for adoption through a legislative procedure by parliament or Government and required by legislative, regulatory and administrative provisions*”¹⁵³.

Only public entities are subject to carry out an SEA and the two public entities in question namely the Malta Resources Authority and the Water Services Corporation may argue that any water management plans and programmes they may formulate, are not subject to an SEA because they do not fall under the scope of the definition of “*plans and programmes*” according to the draft strategic environment assessment regulations which transpose the SEA directive. This is because the definition of plans and programmes lifted straight from the Directive. Having said that however, the plans and programmes required under recent subsidiary legislation, namely under the Regulations for a Framework of Action in the Field of Water Policies do fall within the scope of this definition and should therefore be subject to a Strategic Environment Assessment.

The other conditions which must be met for such water management plans and programmes to be subjected to an SEA according to the draft regulations on the Strategic Environment Assessment, are that the plans and programmes must be set within the framework for future development consent of projects listed in the draft regulations themselves¹⁵⁴ or else require such an assessment under the Flora Fauna and Natural Habitats Protection¹⁵⁵. Any plans relating to groundwater which the Malta Resources Authority is obliged to prepare under the Regulations for a Framework for Action in the Field of Water Policy do in fact also fall under the Environment Impact Assessment regulations. Extraction of groundwater is listed in Schedule 1 Section 5.4 of the EIA Regulations, abstraction or artificial recharge of reservoirs, aqueducts with groundwater where the annual volume of abstraction and or recharge is equivalent to or exceeds the volume of 10 million metres cubed, needs an Environment Planning Statement. Extraction operations which produce less than 10

¹⁵³ Draft Regulations on Strategic Environment Assessments Section 2 definition of “*plans and programmes*”.

¹⁵⁴ LN 204/2001.

¹⁵⁵ LN257/2003.

million metres cubed, annually are not required to carry out an Environment Planning Statement.

There is an ambiguity in development planning law with respect to groundwater use and abstraction, because whilst drilling operations require a development permit, the sinking of wells does not. The situation needs to be rectified.

The sinking of wells is exempt from a development permit probably to encourage the building of wells to collect surface water from rainfall which under the Underground Water Ordinance was referred to as a “*cistern*” to distinguish it from a “*well*” for the purpose of obtaining groundwater. As a result of this exemption, because there is no distinction between the terms “*cistern*” and “*well*”.

Therefore one needs to either distinguish between a “*cistern*” and a “*well*” subjecting the latter to a development permit, or else require that the sinking of wells for the purpose of abstracting groundwater is made subject to an Environment Planning Statement, whatever the amount of cubic metres of groundwater is extracted or used and not as is currently the practice of requiring an Environment Planning Statement only in the case of annual abstraction of 10 million cubic metres or the artificial recharge of the aquifer. The first option is better, as such a development permit should be required for all wells even those which are already in use, in order to link the renewal of the permit, with the holding of a licence to extract, which can only be given at the Malta Resources Authority’s discretion.

The requirement of a development permit for drilling boreholes and wells should first of all be clarified in the sense that the sinking of wells for abstracting groundwater is also to be included as requiring a development permit. The drilling of boreholes should also be subjected to a development permit wherever they are drilled. Development Application for the drilling of new boreholes in “*designated areas*” should be prohibited altogether and existing boreholes should also be subjected to a development permit which is renewed if at all only if the user complies with strict conditions that guarantee that abstraction does not prejudice the good status of groundwater.

Close collaboration between MEPA and the Malta Resources Authority is essential. The Malta Resources Authority has to work out together a series of basic measures which must be complied with in “*designated areas of special importance*” in order to secure compliance with the Habitats Regulations, the Water Policy Framework Regulations and the Regulations on Classes of Use for Development Permits. Unless a clear delineation of administrative duties is carried out and complied with whereby the two competent authorities constantly consult and exchange information with one another, duplication and conflict would inevitably result and this would seriously prejudice compliance.

1.5 Public Participation

This is one area where Maltese law is very developed. Apart from the possibility for a person to contest regulations issued under the Environment Protection Act, the requirement to consult the public is additionally required under subsidiary legislation like the draft Regulations Establishing a Framework of Action on Water Policy, the

Regulations on the Environment Impact Assessment, and the draft Regulations on the Strategic Environment Assessment.

1.6 Monitoring and Registers

Most of the regulations transposing the *acquis communautaire*, which directly or indirectly regulate the status of groundwater, still need to be further fine tuned to specify, in substantive terms which are the “*measures*”, which the current legal provisions state, that the competent authority needs to take. The obligation to monitor for example is under both the enabling acts and all the subsidiary legislation related to groundwater but as the regulations are put into force, the competent authorities may require to specify which are these monitoring measures, to whom they apply and under which circumstances. This lack of specific substantive measures is understandable, because Malta has had to transpose the *acquis* within a very short time, roughly speaking within two years. So it will be only when these regulations will start being implemented that the competent authorities would better understand which are the appropriate monitoring measures suitable for Malta that fall within the parameters of the directives that have been transposed into Maltese law, for harmonisation purposes. The regulations establishing obligations to operate only if licensed by the competent authorities, would definitely be indispensable to secure effective monitoring procedures. The Environment Protection Act and the Malta Resources Authority Act bestow the power on the Minister for the Environment and the Minister for Resources, respectively to give officials of the two authorities monitoring powers and licensing powers. The obtaining position under Maltese law, thanks to the harmonization process with the *acquis communautaire* is now comprehensive. As these legal sources are made of subsidiary legislation the authorities have flexible tools which permit constant and speedy fine tuning if the need arises.

1.6.1 Registers

The practice of registering wells, boreholes and all existing sources used for abstracting groundwater should be revived so as to ensure that an exhaustive inventory of all these sources is compiled. This would definitely enable better monitoring, better compliance and enforcement and the keeping of more accurate records on the amounts of groundwater that are annually extracted.

Such an obligation to register these sources may emanate from the various obligations that need to be fulfilled as basic measures to ensure a good groundwater status under the Regulations for a Framework of Action in the Field of Water Policy. Similarly it would be equally useful to register well-drilling equipment and companies in the well-drilling trade. This would certainly facilitate compliance and make enforcement easier.

1.7 Implementation, Compliance and Enforcement

It is very telling that no court cases exist punishing offenders for illegally abstracting groundwater. Such a situation is the biggest proof we have, that enforcement is basically non-existent. It is also fallacious to rely merely on enforcement to secure compliance. Subsidiary legislation issued under the Malta Resources Authority Act

and the Environment Protection Act should not only provide for the punishment of offenders, but also contain in-built mechanisms to secure compliance and prevent offences. Licensing for example should serve to oblige operators to report to the competent authorities on how they are fulfilling the licensing conditions. Another way of securing compliance is the keeping of records of transport of groundwater in order to trace the sources from where it was extracted, thereby targeting illegal abstraction. The keeping of registers, even for the equipment used to prospect and extract groundwater as afore mentioned is a good way of ensuring that records are kept, such that statistics are available and the volume of water abstracted may be well monitored.

It would also be interesting to see whether the Chairman of the Environment Fund is ready to take the initiative and take action for environmental damages against illegal abstraction of groundwater, or the lack of action to control illegal abstraction of groundwater or its degradation by pollution.

The legal tools are there, only time will tell if these instruments are well applied to secure the implementation of existing legal obligations.

1.8 Quantity and Quality Management

The harmonization process has led to the filling of a lacuna which persisted for many years, namely combating pollution of groundwater and securing its quality management. The various sources of subsidiary legislation which address pollution and quality control both for point as well as diffuse sources leave it up to the competent authorities to licence operations which may have an impact on the quality of the resource, to take preventive measures to eliminate pollution and to safeguard the quality status of groundwater. Again the specific measures which are to be taken are not mentioned in the regulations because of the fact that these regulations are not being implemented as yet and have been published only recently, so transposition of the relevant directives is still rather general. Fine tuning that is the inclusion of specific measures, is necessary even in this case, to ensure better compliance and to enable the operators to have a better knowledge of what they are expected to do.

Otherwise the obtaining legal situation is comprehensive in the sense that the appropriate framework is there. The situation is not so positive with respect to quantity management. Under the draft Regulations for a Framework of Action in the Field of Water Policy, there is an obligation to secure a good status of groundwater. This requires the competent authority, namely the Malta Resources Authority, to take both basic and supplementary measures to ensure that groundwater resources are not depleted. Nevertheless the absence of an inventory of all the sources of groundwater abstraction, does not enable the competent authority to control quantity management. The absence of subsidiary legislation to put into effect the corresponding enabling provisions under the Malta Resources Authority Act, which give power to the Minister for Resources to regulate abstraction, under unenforceable these same obligations. This lacuna must be addressed immediately.

On the other hand, the Regulations on flora, Fauna and Natural Habitats Protection as well as the draft Regulations on a Framework of Action in the field of Water Policy establish protected areas and the *“river basin districts as well as water catchment*

areas” which are subject to plans. In this case therefore there are the necessary legal tools to secure groundwater reserves. Similarly, with respect to the recharge of aquifers, this is now sufficiently regulated under the Regulations on a Framework of Action in the Field of Water Policy.

2. The Transposition of the *Acquis Communautaire* Affecting Groundwater into Maltese Legislation

The harmonization process with the *acquis communautaire* process was very brief for Malta. The process started in the year 2000 and was geared to be completed by the end of 2002, due to the fact that membership in the European Union had been envisaged for 1st January 2003. In the end membership was postponed to 1st May 2004. Nevertheless the process to adopt the whole *acquis* was rapid and it remains to be seen whether the institutions set to implement the *acquis* will be adequate. The transposition of the environmental *acquis* which relates to regulation or which in some way affects the regulation of ground is complete, with the exception of the Biocides Directive which has not been published by the time this report was completed.

The *Acquis Communautaire* affecting groundwater is the following:

1. Council Directive 80/68 – Groundwater Directive which was transposed by L.N. 203/2002. The Regulations for the Protection of Groundwater against Pollution Caused by Dangerous Substances 2002 under the Malta Resources Authority Act.
2. Council Directive 2000/60/EC – Water Framework Directive which at the time of finalizing this report was to be published as the Regulations Establishing a Framework of Action in the field of Water Policy, 2004 under the Malta Resources Authority Act and the Environment Protection Act.
3. Directive 1999/31/EC – Landfill Directive has been transposed by the LN168 of 2002: The Waste Management (Landfill) Regulations, 2002 and amended by LN 289/2002. The Waste Management (Landfill) (Amendment) Regulations under the Environment Protection Act.
4. Directive 91/676/EEC on Nitrates Used in Agriculture has been fully transposed by LN 343/2001. the Regulations on the Protection of Waters against Pollution caused by Nitrates from Agricultural Sources.
5. Directive 92/43/EEC (as amended), the Habitats Directive which has been transposed by LN 257/03 the Flora, Fauna and Natural Habitats Protection Regulations under the Environment Protection Act.
6. The Directive 98/83 EC on the Quality of Water Intended for Human Consumption which was fully transposed by the Quality of Water Intended for Human Consumption Regulations, 2004.

7. Directive on Plant Products was fully transposed by the Plant Protection Products Regulations, 2004 under the Pesticides Control Act.
8. Directive 98/8EC concerning the Placing of Biocidal Products on the market will be fully transposed into Maltese legislation via subsidiary legislation under the Pesticides Control Act.
9. Directive 2001/42/EC on Certain Plans and Programmes for the Protection of the Environment, (SEA Directive) will be transposed by the Regulations on the Strategic Environment Assessment to be issued under the Environment Protection Act. These Regulations are to be published and come into force by July 2004.
10. Directive 85/337/EEC as amended by 2003/35/EC Environmental Impact Assessment Directive transposed by LN204/2001. The Environment Impact Assessment Regulations and will be further amended by regulations which will reflect the amendments introduced by 2003/35/EC.

3. The Future : The New Proposal for a Daughter Groundwater Directive

The proposal for a new groundwater directive is designed to complement the Water Framework Directive which already contains extensive provisions on groundwater. The proposal for a Groundwater Daughter sets criteria for assessing the *chemical status of groundwater*, as required by Article 17.2a of the Water Framework Directive transposed into our legislation via the Water Policy Framework Regulations. It was not considered appropriate by the member States to list new quality standards that would be applied uniformly to all groundwater bodies throughout Europe, because of the natural variability of groundwater chemical composition and the present lack of monitoring data and knowledge.

6. The Articles of the Proposal:
 1. Establish specific measures to prevent and control groundwater pollution. These include special criteria for assessing good chemical status, criteria for identifying significant and sustained upward trends in the concentration of pollutants in groundwater and criteria for defining the starting points for trend reversals.
 2. Introduce more definitions to supplement Water Framework Directive definitions, in particular on threshold values, significant and sustained upward trends and indirect discharges into groundwater.
 3. Establish criteria for the assessment of good groundwater chemical status, specifying the compliance regime for quality standards set out in Annex I to this Directive as well as for threshold values for pollutants, of which requirements are developed in the subsequent article.

4. Provide requirement regarding pollutant threshold values.
5. Set out specific criteria for identifying significant and sustained upward trends in pollutant concentrations and for defining starting points for trend reversals. There are technical specifications in Annex IV to the Directive.
6. Introduce in additional provision to ensure that groundwater bodies are adequately protected.
7. Ensure continuity of the protection provided by the Groundwater Directive 80/68/EEC transposed into Maltese legislation by the Regulations for the Protection of Groundwater from Certain Dangerous Substances as regards prior investigation and authorization of indirect discharges.
8. Annexes II to IV to the Directive may be adapted to scientific and technical progress, according to the Committee procedure established in Article 21 of the Water Framework Directive.

While most Member States support the concept of good groundwater protection, the majority considers assessing chemical status on the basis of compliance with a long list of pan-European quality standards is not the right way to achieve this protection. Malta has taken no o The Commission's proposal envisages listing substances for which EU-wide standards for groundwater already exist. For other substances, member States should establish threshold values based on the criteria in the proposal.

It cannot be envisaged exactly when this new Directive will be accepted and adopted. It should not present any particular difficulties for Malta except for the fact that more intensive monitoring is required and there is ever an increasing need to compile data. From a cost/benefit analysis this proposal represents an improvement over the existing situation. The proposed Groundwater Daughter Directive provides clear additional specifications, which should result in a more harmonized approach to defining and monitoring groundwater status than the existing Water Framework Directive specification. At present there are no common references (selected pollutants and related thresholds) and no common criteria for groundwater, which makes it difficult to achieve comparable chemical status throughout Europe. This could result in considerable economic losses and risks and this Proposal definitely presents an opportunity for improvement in this respect.

PART THREE: CONCLUSIONS AND RECOMMENDATIONS

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PART THREE

Conclusions and Recommendations

1. Legal Status of Groundwater

Obtaining Position

Groundwater is owned by the owner of the tenement underneath where it is located. Private ownership has however been subjected to a stringent regulatory framework which is intended to safeguard the conservation of groundwater for the benefit of everybody.

Proposal

An amendment of the civil code should be made qualifying the “*right of use*” of the owner of the tenement where the groundwater is allocated, to be subjected to the various laws and regulations which preserve the good status of this common resource. Apart from the rights acquired by neighbouring tenements, as it now stands. This would eliminate any doubts that may arise when enforcing the various sources of subsidiary legislation aiming at conserving the good status of the resource. Such an amendment would eliminate the need to require the expropriation of groundwater reserves located under privately owned tenements

In other words, if such an amendment is made, there should be no problems to implement the recently introduced legal obligations which encroach upon the exclusive right of ownership.

2. Regulating Prospecting for Groundwater

Obtaining Position

Although the Malta Resources Authority Act’s enabling position mentions that any operation relating to water management, including groundwater, may be required to have an authorization from the Malta Resources Authority, the fact that there is no subsidiary legislation regulating prospecting for groundwater in specific substantive terms has created a situation where this legal obligation of requiring authorization cannot be enforced.

The other regulations transposing the groundwater directive and the water framework directive, namely the Protection of Groundwater Against Pollution caused by Dangerous Substances Regulations of 2002 and the Water Policy Framework Regulations, do not fill this lacuna because the Malta Resource Authority as the competent authority needs to specify also in substantive legal terms *via* subsidiary legislation the “necessary measure” to protect, enhance and restore all bodies of groundwater and maintain, “a good ground water status”.

Proposal

There is an immediate need to issue subsidiary legislation under the Malta Resource Authority Act even for an interim period to prohibit the sinking of new wells with the aim of prospecting for groundwater. The situation is so urgent that such regulations should be issued immediately, without procrastinating any further.

3. Protecting Groundwater From Depletion

3.1 Regulating the Extraction and Use of Groundwater

As in the case of prospecting for groundwater, the obtaining position has a serious lacuna where illegal extraction is rampant and without any form of control whatsoever.

Proposal

Subsidiary legislation must be issued urgently under the Malta Resources Authority Act to prohibit first and foremost the sale of groundwater except in the case of the Water Services Corporation which sells groundwater for public consumption.

The abstraction of groundwater should be metered as soon as reasonably practicable, and after requiring every person who is the owner of a tenement which has a well used to abstract groundwater, to register it. Registration of wells, boreholes etc... may be done during the current rural land registration process. This obligation is already included as one the basic measures to be taken by the Malta Resources Authority under the Draft Regulations for the Establishment of Plan of Action in the Field of Water Policy.

Abstraction should also be subjected to a permit which is granted at the Malta Resources Authority's discretion. Other measures which should be introduced to regulate abstraction is the registration of well-drilling equipment and water pumps used for abstracting groundwater.

3.2. Specially Protected Areas and Recharge Aquifers

Obtaining Position

The situation is now well regulated both by virtue of the need to establish "Water Controlled Areas" under the draft Regulation Establishing a Framework of Action in the Field of Water Policy and the designation of areas of special importance under the Habitats Regulations. Recharge of aquifers also requires authorization by the competent authority.

Proposal

The Malta Resources Authority and MEPA should conclude as soon as possible a Memorandum of Understanding identifying how the two authorities should consult each other to formulate conditions agreeable to both when granting authorizations required by law to safeguard the conservation of a good status of groundwater found in specially protected areas or “water controlled areas” and the artificial recharge of aquifers.

4. Regulation of the Well-Drilling Trade

Obtaining Position

Although the requirement to regulate well-drilling operations is essential to implement successfully the Water Framework Directive as transposed by the Water Policy Framework Regulations, there are no substantive legal provisions which subject operators to abide by a set of legal obligations.

Proposal

It is essential to urgently issue subsidiary legislation to regulate well-drilling operations, distinguishing between sinking of ‘wells’ for the purpose of abstracting groundwater as opposed to sinking of ‘wells’ or ‘cisterns’ to store surface water derived from the collection of rainfall. The former operations should be strictly regulated and should require a development permit which can only be granted at MEPA’s discretion after it consults the Malta Resources Authority. The other operation should be encouraged and perhaps incentives may be devised to revive this old practice. All new buildings should be obliged to collect rainwater in a cistern.

The sinking of wells and drilling of boreholes for abstracting groundwater should be regulated in such a manner so as to secure compliance by registering drilling apparatus and by embarking on a comprehensive process of registering all land on the Maltese Islands to eliminate abuse, since any illegal wells or boreholes would be discovered and the owners of the tenements subjected to heavy fines.

5. Protection of Groundwater from Pollution

The Obtaining Position

The transportation of the Water Framework Directive by the Draft Regulations on the Establishment of a Framework of Action in the field of Water Policy has filled in a significant gap which previously existed under Maltese legislation regulating groundwater – namely, the protection of groundwater from a holistic perspective. This Directive referred to as an umbrella directive obliges member states to formulate a legal instrument which not only addresses pollution from both point and diffuse sources but which above all, targets the achievement of a good ground water status. The major obligations with respect to groundwater in the draft Regulations on the

Establishment of a Framework for Action in the Field of water Policy, in fact, include the identification of the bodies of groundwater, their inclusion in Water Catchment District and the formulation of plan for “Water Catchment Areas” that must include several minimum basic measurements apart from other supplementary requirement which are essential to endure an optimum status for groundwater.

Similarly, the other regulations transposing the *acquis*, especially the Regulations for the Protection of Groundwater from Dangerous Substances which is even more stringent than the *acquis*, as it prohibits pollution not only from the dangerous substances listed in the Schedule of the Directive, but also from any substance which can “*endanger human health or water supplies, harm living resources and the aquatic ecosystem or interfere with other legitimate uses of water*” and the other regulations which address and prevent pollution from diffuse sources listed in chapter 2 of Part 2 of this report.

All these regulations fully and faithfully transpose the respective directive providing a comprehensive regime which leaves no gaps.

Proposal

As a proposal, one can only suggest that with the passage of time, the generic provisions in these regulations which transpose in general terms the provision of the Directive would be fine tuned to include the specific measure which are necessary to implement effectively the general measures listed in the regulations. This however acquires time as the regulations are implemented and as any management plans required within specific timeframes are formulated and applied. The Biocides Regulations transposing the Biocides Directive must be issued and put into force to make transposition complete.

6. Administration of Groundwater

Obtaining Position

Both the Minister for Resources and the Minister for the Environment have wide enabling powers which are in term executed by two public entities autonomous from the government namely, the Malta Resources Authority and MEPA. In turn, the Ministers are answerable to Parliament not only with respect to their responsibilities but also in relations to all the operations carried out by these Authorities.

The Authorities have wide monitoring and advisory powers. They are both authorized to license water management operations. There is the possibility of conflict and duplication between the roles of these two Authorities but a memorandum of understanding is being formulated to supplement existing legislation and identify the administrative obligations of these two authorities. Subsidiary legislation identifies who is the competent authority but more often than not, conditions for groundwater management must be agreed to by both entities, even if a license to operate is issued by one of the Authorities, so as to eliminate bureaucracy and have a one stop shop system.

Proposal

Only time will tell if MEPA and the Malta Resources Authority will live up to their wide mandate and work together in close cooperation. The legal tools are there and they are comprehensive in the sense that they endow these authorities with the required legal power to fulfil their mandate.

The Chairman of the Environment Fund must be prepared to act as a diligent watch dog and seek redress against these Authorities by claiming an action for environment damage if the Authorities fail to deliver. The respective Ministries must also ensure that implementation is underway, after all failure to implement renders the government responsibility and not MEPA, or the Malta Resources Authority when it comes to infringement procedures for failing to implement the *acquis*. Legal transportation with respect to the institutional set up is complete. It is necessary to see now whether this institutional set up works in practice.

7. Cost Recovery for Groundwater Use

Obtaining Situation

It has been stressed that the situation is indeed incredible. Not only is abstraction not metered and therefore, not being charged for but it is very lucrative to sell the groundwater abstracted, for free, to other individuals at a very lucrative price. As rainfall is scarce and the summer months are dry, the demand for groundwater to water gardens, fill in swimming pools and top up cisterns is ever increasing. The lack of subsidiary legislation, specifically prohibiting illegal extraction and attributing criminal liability for offenders, as well as the illegal sale of groundwater is appalling, to say the least.

This rampant abuse has been going on for years and although cost-recovery is an obligation under the Regulations for a Framework establishing Action in the Field of Water Policy, it will be difficult to pass immediately from a free-for-all situation to a cost-recovery process, overnight.

Proposal

Subsidiary legislation metering the abstraction of groundwater as well as, the prohibition of sale of groundwater except where it is permitted or authorized by the Malta Resources Authority and the introduction of a staggered cost-recovery system, must be urgently introduced. The enabling provisions to issue such cost-recovery measures exist under both the Environment Protection Act and the Malta Resources Authority Act.

8. Groundwater and Development Planning

Obtaining Position

Development permits for prospecting for groundwater by drilling boreholes are not required except in designated areas. The sinking of wells, whether it is for collecting surface water from rainfall or from the abstraction of groundwater is not considered to be development.

An Environment Planning Statement is required for artificial recharge of aquifers and in the case of abstraction only when the annual volume of groundwater abstracted is higher than ten million cubic meters.

The Strategic Environment Assessment Regulations will oblige public entities to carry out a Strategic Environment Assessment for places and programmes in water management.

Proposal

Introduce a development permit existing wells and boreholes for groundwater abstraction wherever they are located. Prohibit the drilling of new boreholes and the sinking of new wells for groundwater abstraction. Distinguish between the above-mentioned development permits, that is, whether they are requested by full-time or part-time farmers, industry or individuals.

An Environment Planning Statement should always be required when groundwater is abstracted, whatever the amount.

9. Public Participation

Obtaining Position

In conformity with the *acquis*, Maltese law in this respect enables public participation even in the initial stage both with respect to the publication of legislation, the review of conditions imposed in licences and public hearings. The draft Strategic Environment Assessment Regulations provides the public with all the possibilities to intervene at various stages in the drawing up of the Assessment, similarly under the Environment Impact Assessment process.

No proposals therefore need to be made.

10. The Keeping of Registers and Monitoring

Obtaining Situation

A register is required for:

- All authorisations granted by virtue of the Regulations for the Protection of Groundwater from Dangerous Substances, and for discharges of substances listed in Schedule I and II of these same regulations which are allowed by the competent authority.
- All areas lying within each water catchment district which have been designated as requiring special protection for conservation of groundwater.
- All bodies of groundwater identified.
- All sources for groundwater abstraction.
- The authorisation of the groundwater abstracted.

As for monitoring the enabling Acts and the subsidiary legislation provide for monitoring in a rather exhaustive manner.

Proposal

In addition to all registers, I would suggest a register for water pumps and a register for drilling equipment imported and in use in Malta.

In built mechanisms that facilitate monitoring like reporting requirements, could be also introduced unless they will be requisite conditions for the granting of authorisations by the competent authorities. Otherwise there are no further proposals to make, except for auguring the competent authorities to ensure, that they live up to their monitoring obligations effectively.

11. Liability and Enforcement

Obtaining Position

Enforcement is totally absent. The legal tools are there. The legal sources provide for civil, criminal and even environmental liability but enforcement is strongly shackled by the absence of substantive legal provisions that put into effect the enabling provisions that prohibit illegal abstraction of groundwater.

The more recent regulations will come into force on 1st May 2004, the nspectorate established under the Environment Protection Act is even endowed with executive powers but these have never been applied. No action has ever been initiated by the Chairperson of the Environment Fund for environmental liability even if abuse is rampant.

Proposal

The public authorities should seriously embark on a compliance campaign and start to enforce the existing legal obligations. From a legal perspective there is nothing else to propose, the existing legal instruments are adequately equipped to guarantee compliance and do not have any lacunae with respect to enforcement, but there has been until now no political and administrative will to implement the enforcement measures that are available under the various legal sources relating to regulation of groundwater use and management.

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