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in

Hamdy A. (ed.), Tüzün M. (ed.), Lamaddalena N. (ed.), Todorovic M. (ed.), Bogliotti C. (ed.).
Participatory water saving management and water cultural heritage

Bari : CIHEAM
Options Méditerranéennes : Série B. Etudes et Recherches; n. 48

2004
pages 199-207

WATER RESOURCES MANAGEMENT IN MALTA: CULTURAL HERITAGE AND LEGAL AND ADMINISTRATIVE SET-UP

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SUMMARY – The paper provides a comprehensive review on the water resources development in Malta throughout the centuries. Moreover, this report is focused on the legal and administrative set-up related to the water resources in Malta. This set-up has been enhanced so that a proper integrated water demand management could be achieved. Through such set-ups and through the integrated approach involving the use of legislative, economic and technical measures, and the involvement of the public in activities aimed at the rational use of water resources, the Water Management in Malta, after years of striving, has started gearing up.

Key words: water resources, cultural heritage, legal framework, administrative framework, water authority, Malta.

INTRODUCTION

The availability of water is a key factor in socio-economic development. In Malta, we are confronted with a water problem due to limited resources in relation to demand; a problem which forces us to look at the integrated management of all resources, including proper groundwater utilization, full use of surface runoff and desalination.

The establishment of water reuse techniques and appropriate policies for water conservation, under both quality and quantity aspects, may facilitate the solution of these problems. Other pressing problems related to the water quality aspects of the water supplied to the customer as well as the reliability and cost-effectiveness of the strategies and operational methods used to attain this are being addressed. Inadequate institutional arrangements can be a serious stumbling block to the successful implementation of an Integrated Water Resources Management Planning. A Legal framework provides the essential requirement within which the water organization in any country has to operate.

In this report, special emphasis is given on the legal and administrative set-up which have been enhanced so that a proper integrated water demand management could be achieved. Through such set-ups and through the integrated approach involving the use of legislative, economic and technical measures, and the involvement of the public in activities aimed at the rational use of water resources, the Water Management in Malta, after years of striving, has started gearing up. Hopefully, in a few years time, the Corporation, through an ongoing operational costs cutting exercise and resulting savings as well as rational use of water and energy, will result in a cost-effective public entity within a context of an essential service-provider environment.

WATER CULTURAL HERITAGE IN MALTA

The existence and prosperity of any community depend upon the availability of good quality water supplies. The availability of water in certain regions of the earth has influenced massive migration of peoples. In fact, climate changes affecting water have been the reason behind important historical migrations.

It is evident that the first inhabitants of the Maltese Islands must have found the available water resources satisfactory. Geo-morphologically, the harbours which are mostly on the East or North East part of the island can be defined as being estuaries of old rivers which flowed from rocky hills which are situated on the west. The first settlers arriving on the island's shores must have first settled near the coast and then moved slowly inland to those parts where natural springs provided sufficient water supplies. Later on, tanks began to be excavated and these were used to store rain water. One can see such tanks all over the island. These date back to Medieval, Roman, Punic and even to Neolithic times. The water issue in Malta was given greater importance following the arrival of the Knights of St. John in 1530. In the first comprehensive assessment of Malta's water resources situation carried out by the Knights prior to their acceptance of Emperor Charles V's offer of the Maltese Islands, the delegation described the water situation as unsatisfactory with the available waters being "The water is salty and sedimentary; and the sweeter springs in the Island, I think come mostly from winter showers. Their source is not deep, for in summer they frequently dry up and levels always diminish. Drinking water comes from the rain (when there is any) which is preserved in cisterns and more frequently in ditches".

The population at that time amounted to 15,000 and it was clear for the Knights that to guarantee a good degree of success to their mission to protect these islands, something had to be done to enhance the water resources. For this purpose, after some years, a then water expert, Padre Giacomo, was brought to Malta. He elaborated a scheme whereby spring water naturally occurring in the Rabat plateau located on the perched aquifer was to be conveyed to the newly build city of Valletta. Lack of funds delayed its implementation and it was only in 1610, following two consecutive dry years, that Grandmaster Alof de Wignacourt initiated the construction of an aqueduct partly financing it by his own funds. Sufficient evidence exists to prove that these springs were exploited even before the arrival of the Knights.

The aqueduct was commissioned in 1615 and about 1400 m^3/day passed through the conduit supplying about 30,000 people. It must be said that the great majority of water available for public supply was only available to inhabitants of the cities, whereas the rural villages depended on their local underground cisterns. The Wignacourt aqueduct continued to provide the only lifeline for the towns and cities of Attard, Lija, Balzan, Mosta, Zebbug, Hamrun, Qormi, Floriana and Valletta, throughout the seventeenth and eighteenth century. The availability of water in these areas brought about an increase in population which reached 114,000 in 1798.

A number of dry years between 1834 and 1841 compelled the authorities, now the English, to construct a second aqueduct known as the Fawwara aqueduct which conveyed spring water present in the southern end of the Rabat - Dingli plateau to the three cities i.e. Cospicua, Vittoriosa and Senglea together with the towns and villages, Luqa, Mqabba, Tarxien and Paola. The water amount supplied reached 275 m^3/day. Thus, the two aqueducts were only recharged from the springs flowing from the Perched Aquifer. They were the major resources of potable water until the middle of the 18th century. An intensive water exploration campaign carried out between 1864 and 1866 resulted in the sinking of 175 shafts and the driving of 8.3 km of galleries in the Upper Coralline Limestone. These newly-developed springs were connected to the Wignacourt aqueduct, thus increasing the output by 700 m^3/day.

In a letter to Sir Walter Hely-Hutchinson, then Lieutenant Governor and Chief Secretary to the Government, dated 30th August 1884, Robert Chadwick reported that the Wignacourt aqueduct discharged an average of 2000 m^3/day or 285.1 litres per head/day taking into consideration that the user population was only 70,000. In addition to the major towns, this population included the English troops.

Unfortunately, not all the Maltese population were supplied by the aqueducts. Rainwater collection in private and public underground cisterns was still considered to be a much safer way to have a water supply. As stated by Lord Chadwick (Chadwick Report, 1884), a campaign was carried out to increase the storage capacity of these tanks to over 1 million m^3. These reservoirs were generally found in the main cities such as Valletta, Floriana, Cospicua, Senglea and Vittoriosa. There was, however, one big problem with these reservoirs. Any contaminants which might be found on roads such as leaking sewers, cesspits, animal excreta, vermin and stray animals, polluted the stored water. This was the main reason behind the numerous contagious diseases and high death rates which scourged the Maltese Islands at that time. An example of this was the 1865 cholera epidemic which highlighted the lack of quality of potable water. A report by Dr. Sutherland in 1867 illustrated that while samples taken from aqueducts and distribution tanks were found to be suitable for potable purposes, water in the underground cisterns was found to be highly contaminated. Several villages depended solely on these underground tanks and so were more prone to outbreaks of disease.

The first decade of the 20th century was marked by two serious typhoid fever outbreaks. The origin of these diseases was traced to organic pollutants reaching the perched aquifer which fed the aqueducts. These organic pollutants were the result of sudden leaching of manure after heavy rainfall. One must note that probably this was the first incidence of such contamination ever reported. To-date, no effective solution has been found to reverse the effect of such contamination in the Maltese aquifers.

The year 1909 is one of the most important milestones in the evolution of water quality in Malta. On the recommendations of Sir Temi Zammit and Major A. H. Morris, sterilisation via chlorination was initiated thus rendering public supply safer. Another measure taken was to replace the open channel system by a closed pipe system. These measures brought a marked improvement in the standard of living and a definite decrease in the death rate. Health Authorities initiated a routine quality control programme and results were documented in Annual Reports.

In 1854, Dr. Nicola Zammit proposed the drilling of deep wells to exploit an underground source which, according to him, was recharged from the neighbouring continents i.e. Africa and Europe. Though his thesis was unfounded, the authorities accepted the idea and a deep shaft was sunk at Ta' l-Armier, between Marsa and Qormi. This can be identified as the first development of the Mean Sea Level Aquifer. The quality of the water was inferior to that found on the perched aquifer. The output of this station was 540 m^3/day and it was directed to Cospicua and Paola. By the year 1884, the total average supply of potable water amounted to 3000 m^3/day. However, this amount was only available to 60% of the total population i.e. people in Valletta, Floriana, Cospicua, Senglea, Vittoriosa, Hamrun, Pieta', Msida, Sliema, Zebbug, Birkirkara, Lija, Attard, Balzan and Mosta plus the merchant navy and army housed in quarters in the harbour area.

The next major development of the Mean Sea Level Aquifer occurred in 1887, when the Wied il-Kbir pumping station was commissioned.

Following sinking of shafts and connecting galleries at Wied is-Sewda, a further 410 m^3/day were extracted from Wied is-Sewda pumping stations and pumped to Ta' Qali Reservoirs for domestic purposes. The Wied is-Sewda Pumping Station was later put off line after a station was commissioned in 1924 downstream known as Tal-Hlas Pumping Station.

By the end of the 19th century, the total resources available for the public supply amounted to 5433 m^3/day. These included water from Wignacourt Aqueduct, Buskett, Fawwara, Armier shaft, Wied il-Kbir, Wied is-Sewda and San Anton (Morris report 1900 - 1901).

Although the San Anton shaft was originally intended to supply water to irrigate San Anton Gardens, it supplied also the villages of Naxxar and Gharghur with potable water.

The development of the Mean Sea Level Aquifer proceeded in early 1900 when the Wied il-Kbir and Wied is-Sewda pumping station were connected by a gallery. This project was completed in 1909/1910 and this hydro-geological intervention meant an increase in productivity of 4550 m^3/day. During the First World War (1914-1918), no works were carried out to augment production except the commencement of the construction of Tal-Hlas pumping station previously mentioned.

During the First World War, however, a heavy demand for potable water made the Governor seek advice from Colonel J. C. Robertson who recommended

a. deepening of existing galleries;
b. new galleries at Birzebbugia - West of St. Julians and Wied il-Ghasel.

Both these recommendations were hydro-geologically ill-conceived. Their partial implementation proved that no consideration had been given to the adverse effects on the water quality. In fact, in 1925, the Wied Dalam pumping station (B'Bugia) was commissioned giving a low output and bad quality. The deepening of the Wied il-Kbir/Wied is-Sewda galleries took 19 years to complete (1920 - 1939) and no quantity improvement was ever recorded.

The Wied il-Ghasel scheme was commissioned in 1938 and though the average production was 1900 m^3/day (from 2.2 km of galleries), the area is close to the shore and highly fractured so that saline intrusion impaired on its quality.

This project marked the end of the first phase of the development of the Mean Sea Level Aquifer. The yield at that time was 18,200 m^3/day. For about 10 years, except for the extension by about 250 m of the Via Dingli pumping station galleries, no further groundwater development was done.

With the transfer of the 8th Army from Africa during the Second World War in preparation for the invasion of Sicily, there was an increased demand. This required a short term solution. Dr. E. B. Bailey, the then Director of the Geological Survey, U.K., recommended the drilling of boreholes to 15 m below the sea level. The first borehole programme commenced in 1943. The Royal Engineers drilled 37, 6"/10" diameter boreholes. Fourteen were drilled in the Lower Corallline Limestone and 23 in the Upper Coralline Limestone. This drilling campaign failed to meet Malta's growing demand as a few had to be abandoned, others had very low yield and most important, logistic problems cropped up due to the remoteness of some. These overwhelming distribution constraints compelled the authorities to resort to the old idea of driving galleries at sea level and construction of pumping stations at the intersection of these galleries.

Thus, the second phase of the groundwater development was initiated in 1944 with the digging of the Ta' Qali pumping station which was strategically located close to Ta' Qali reservoirs. Simultaneously, galleries at Tal-Hlas were also started and were intersectioned to meet a southward facing gallery at Ta' Qali. Technical difficulties, however, impeded the connection of these two galleries.

One here needs to mention T. O. Morris, whose contribution to the water supply in Malta has been immeasurable. In his report published in 1952, he gave invaluable recommendations as to the best method of groundwater extraction. He carried out exploratory tests following the drilling of a network of gauging boreholes. The main result of his studies were that since the purest water lies on the upper part of the aquifer and this lies above the mean sea level, then the best way to exploit groundwater is via galleries and not boreholes.

During the years 1955 and 1965, both the Mean Sea Lever Aquifer and Upper Coralline areas underwent an extensive gallery driving programme. The last and longest gallery system to be commissioned was that at Ta' Kandja. Tables 1 and 2 show in chronological order all pumping stations and galleries driven throughout the years. The groundwater production was increased to about 38,200 m^3/day.

Table 1. Details of galleries and stations in the Mean Sea Level Aquifer

Name of pumping station	Year of completion	Number of galleries	Total length (m)	Bench mark amsl (m)	Depth of main shaft (m)
Wied il-Kbir	1887	6	4200	24.48	6.21
San Anton	1896	1	N/A	50.23	48.59
Hlas	1918	6	5100	29.19	29.58
Wied Dalam	1925	3	1650	21.21	23.94
Wied il-Ghasel	1926	14	2680	45.51	14.57
Speranza	1956	8	5500	63.90	69.68
Bakkja	1957	6	5400	92.57	100.24
Qali	1961	6	5400	92.87	100.17
Kandja	1963	6	6100	92.51	97.46

Table 2. Details of galleries and stations in the perched aquifer

Name of pumping station	Year of completion	Number of galleries	Total length (m)	Bench mark amsl (m)	Depth of main shaft (m)
Dingli Road	1885	4	1800	207.36	15.02
Ghajn Qajjed	1926	N/A	N/A	N/A	N/A
Mizieb	1957	5	650	56.84	69.64
Bingemma	1960	5	2800	114.53	121.36
Falka	1960	4	500	104.11	93.02
Mgarr	1962	3	220	90.50	33.50

Rapid economic growth and higher population increased water demand and with the annual average chloride level reaching 840 ppm, compelled the Government to look for alternative sources which at that time indicated artificial resources. In 1963, it was decided that a multi-stage flash (MSF) distillation plant be built in conjunction with the “B” station of the Power House of Marsa. At that time, this process was proved to be the most successful and economical way to produce water for potable purposes and as a make-up for boilers. ATIGA Report (1972) projected that the total production from such MSF plants would reach 25,600 m^3/day by 1973 and 50,000 m^3/day by 1996. However, due to increasing fuel costs in the early seventies, only 4 MSF’s were installed and were operated only sparingly. The peak output was 12,620 m^3/day. To make up for lack of production, in 1972, it was decided to exploit further groundwater. With equipment donated by Libya, an intensive drilling programme was commissioned. The drilling of boreholes spread over the MSL (mean sea level) aquifer was originally recommended by ATIGA, 1972. This would have, theoretically, guaranteed about 36,900 m^3/day as a safe yield and these would have been so extracted as to allow a good distribution all over the aquifer. However, about 150 boreholes were drilled mainly in the central and southern parts; they did indeed produce a marked increased in production but alas, a deteriorating chemical quality. These newly-drilled boreholes affected production inside the galleries by starving them from their fresh water recharge and by increasing localised up-coning or elevation of the saline interface. By 1980, the average annual salinity reached 1600 mg/l. Production from the MSL aquifer alone reached 48,650 m^3/day. This figure could not meet the water demand and yet once again the Government had to diversify ways to produce more water artificially to make up for the lacking groundwater production and deteriorating quality.

During the late seventies, a new desalination technology had made great strides and progress. Due to the high fuel prices, the Government turned its attention to a relatively novel desalination technology namely Reverse Osmosis. It was decided that a 20,000 m^3/day plant be installed on the SW part of the island namely at Ghar Lapsi. This could guarantee water to the worst affected part, namely the central and southern part of Malta where rapid industrialisation and urbanisation were taking place. In 1982, the Ghar Lapsi SW Plant was the largest to be built in the world. A brackish Reverse Osmosis plant was also commissioned in 1983 at Marsa.

Water had become a political issue and increasing water demands created political pressures on the Government. Thus, a second sea water Reverse Osmosis Plant was commissioned in 1986. This was located in the touristic Sliema area at Tigne’. Surprisingly enough, increased production produced an increased demand. Water conservation methods and concepts were still primitive. Prior to the commissioning of the Tigne’ Reverse Osmosis Plant, water was imported from Sicily via tankers. Lack of water supply and quality was one of the main reasons for the change in public opinion which brought about a change in government in 1987.

In 1988, yet another plant was commissioned, this time in the North at Cirkewwa. Thus, improved water quality was guaranteed to the North and to Gozo which up till that time depended solely on groundwater.

Increasing urbanisation and rapid economic growth brought about the need for more water. In 1992, the fourth sea water plant was commissioned at Pembroke. Simultaneously with these projects, the authorities commissioned studies in Groundwater Management (BRGM, 1991) and also in leak detection and water conservation methods. These proved to be very promising since to date, Malta can boast to have almost 50% of its desalination potential as spare capacity. Little or no decrease in groundwater production has been registered. In fact, whenever possible, due to the cheaper production costs of groundwater, any decrease in water demand immediately leads to shutdowns of Reverse Osmosis units. However, one must note that, improved distribution systems have not as yet guaranteed a uniform quality all over the islands. A groundwater reduction programme has been proposed by BRGM (1991) but to-date due to financial considerations, this reduction programme as proposed, has been shelved. A slightly different and not that thorough reduction has however, been made.

WATER AND SEWERAGE MANAGEMENT IN MALTA: THE ADMINISTRATIVE AND LEGAL FRAMEWORK

Pre-Water Services Corporation days, the water cycle in Malta was managed by the Water Works Department. This was a Government department and run by civil servants obviously employed by the Government. The relatively strict and cumbersome procedures used by the Government in fulfillment with the protection of public funds, led more than often to a marked drop in efficiency and accountability. This led to the need to free, to a certain extent, always within the government financial regulations, the operational procedures managing water in Malta. Thus, a public corporation was founded. The Water Services Corporation was established in 1992 (Act XXIII of 1991) in order to provide for the establishment of a body corporate for the exercise and performance functions related to the acquisition, transformation, manufacture, distribution and sale of potable and non-potable water, to the treatment and disposal or re-use of sewage and waste water and re-use of storm water runoff. The Act serves as the legislative basis and includes all tools and instruments for water resources management issues. Thus, the act regulates the whole water cycle (acquisition, transformation, production, distribution of drinking and non-drinking water', disposal and reuse of sewage and wastewater, reuse of storm water runoff) as well as water trading rights between individuals. It sets up the WSC as a corporate body in charge of water management in Malta.

The Corporation is legally bound to “promote the reasonable use of water and encourage the conservation and appropriate re-use of water resources”. The following report will address the organizational and administrative set-up of the main water management body in Malta namely the Water Service Corporation (WSC) as well as the interactions between the WSC and the various regulating bodies, users and stakeholders.

The Mission Statement of the Corporation to-date is “to achieve a more rational and economic use of water in the Maltese Islands through the maintenance of an equilibrium between supply and demand, and to support the general social and economic development while protecting the environment”. The vision resulting from this mission statement is to attain sustainability in the production, supply and distribution of water whilst meeting the social and environmental obligations of the Corporation. The ongoing Corporation objective is attainment of an overall cost-effectiveness. With the amalgamation of the Sewerage Unit, the overall mission statement, objectives and vision will inevitably have some alterations.

In order to attain such objectives, visions, etc, the Corporation has for these last few years undergone a re-structuring phase which has shifted from a normal management of finances and technical issues on a centralized basis to a more decentralized manner in the form of small business units with other supporting units which provide ancillary services and support to the main business units.

With this type of set-up, the Water Services Corporation offers the kind of service to the customer which would enable an effective response to requests related to water needs, water cuts, water quality issues as well as billing in a relatively short period of time. The customer range from domestic households to industry to tourism to agriculture.

The Water Services Corporation offers a wide range of other services. These include in-house training of personnel, training to outside entities, diploma courses in operations management, in hydrology, in desalination and Health and Safety. Moreover, an R & D section has been established some years back.

To-date, the WSC employees number a total of 1698 comprising 1084 people in the water sector and 614 in the sewerage unit. At this early stage, both sectors are being managed independently from each other as project and budget commitments of the sewerage sector have to be re-defined and re-assessed. Large projects are underway in the Sewerage Unit and these include the execution of the Sewerage Master Plan which in turns includes the construction of the Sewage Treatment Plants. The following is a list of Plants:

1. Gozo Treatment Plant - December 2005 to be operational - Lm 3.3 million - 6000m^3 per day
2. Malta North - February 2006 to be operational - Lm 5.1 million - 5300 m^3 per day
3. Malta South - April 2007 to be operational - Lm 25 million - including 45,000m^3 per day. This figure includes the existing 15,000m^3 per day Sant Antnin Plant - Decisions on the operation of Sant Antnin will be taken at a later date.

All plants will have Tertiary treatment for agricultural use and other purposes.

WATER AND AGRICULTURE IN MALTA

The relation between agricultural activities and the availability of water in Malta has always been one of “there can’t be one without the other”. And this comes out quite clearly from the historical accounts of Malta and the early inhabitants.

Agricultural activity in Malta, as in all Mediterranean countries has been going on for a very long time. In the early Middle Ages (9th century) the Arabs started field terracing to be able to cultivate the slopes of the predominantly hilly island. They also introduced new methods of irrigation by flooding.

Relatively few changes were carried out during the next thousand years and agriculture continued to depend on rainfall supplemented by very small field reservoirs and wells. In the late 19th century a series of small dams was constructed to form natural reservoirs in one of the valleys. The idea was to provide water for irrigation purposes but the project soon proved to be of little use: the ground was too porous and most of the water was lost. Moreover, the high salinity due by this accumulation of standing water also caused problems while the area became a breeding ground for mosquitoes and malaria.

Malta has therefore always had to face serious problems as regards the water supply for agriculture. Even today, in spite of the widespread use of modern technology to increase the supply of water for cultivation, situations of scarcity do present themselves and this is one of the main factors limiting agricultural production.

Although in recent years the area of irrigated land has increased – mainly thanks to the use of trickle irrigation - it still forms less than 12% of the total arable land and most of the it belongs to medium-sized farms (2.25 - 2.50 ha). Furrow irrigation is still the most popular method of irrigation but use of sprinklers and trickle irrigation is widespread.

Four main sources of irrigation waters can be identified - perched aquifer, sea level upper water table, sea level lower water table and treated effluent. The perched aquifer has the lowest salinity levels while the sea level lower water table has the highest with the other sources having medium to high concentrations of salts. Salinity in aquifers with hydraulic contact with sea water is mainly attributed to over pumping and subsequent salt water intrusion.

From an administrative point of view, the supply of water for agriculture originates from either Water Services Corporation sources as well as from private albeit illegal sources. Another source is treated sewage effluent which up till now is provided and in limited quantities in the South East of the Island. This source has been managed by the Drainage Department but which has been amalgamated on 1st October 2003 with the Water Services Corporation. The extraction of groundwater is to be regulated by extraction licenses which are the sole responsibility of the Malta Resources Authority. This issue is now being discussed with everyone concerned so as the maximum benefit is accrued from such licenses.

WATER AND MALTA RESOURCES AUTHORITY

The Directorate for Water Resources is one of three directorates of the Malta Resources Authority (MRA), established by Parliament through the MRA Act of 2001. The mandate of the Directorate devolves under Article 5(2) of the Act that assigns to the Directorate the ”responsibility for the regulation of all practices relating to water resources, drainage and sewage”

The availability of water resources in Malta has been always considered as an important factor for the sustainable development of the country. In the course of time the water supply in Malta has evolved from simple methods now considered archaic, to high-tech systems that apply state-of-the art technology in desalination. Though Malta has today overcome its inherent vulnerability to drought, nonetheless it needs to manage its water resources in the most cost effective manner to meet the national demand without imposing excessive financial burdens on the tax-payer. Within this framework therefore, the water and waste-water utilities are not only expected to achieve high levels of efficiency, but also seek innovative solutions that guarantee without fail uninterrupted service to all consumers.

The Directorate of Water Resources is therefore responsible to ensure that the operators in the water sector deliver the best service at the most amenable price. As the Regulator it is responsible to see that:

a. tariffs are fair and socially acceptable;
b. operators fulfill their responsibilities;
c. standards of service are set and adhered to;
d. efficiency is maintained at all levels of operation;
e. ensure fair competition.

It has also the duty to see that the country’s natural resources are exploited in a sustainable way and protected from depletory practices that will ultimately place heavier dependency on more costly desalination sources.

From the onset of its operation, the Directorate developed strategic objectives and the relevant tasks needed to reach these objectives. The plan identified the administrative and financial structures needed for comprehensive regulation of the water sector. Six strategic objectives were defined, based on an assessment of the existing needs of the sector and the results expected from the regulator. These objectives are:

1. Stewardship of natural water resources;
2. Building an active and informed constituency on water related issues;
3. Establishing an effective regulation of the economic and financial efficiency of the water utilities;
4. Ensuring consumer confidence and satisfaction on services provided by the water industry;
5. Meet the targets and international obligations set by Government;
6. Address water related issues through sound science and credible technological methods.

For each of the aforementioned objectives, a set of priority activities were set for the three year period starting 2002. In its first year of operation the Directorate focuses primarily on safeguarding water consumer rights by seeing that an efficient and good-quality service is delivered by the utilities. As such, the Directorate is in the process of setting up the tools required to ensure that the utilities meet the expected standards and satisfy consumer expectations. In particular:

a. It will establishing a constructive dialogue with the Water Services Corporation based of the requirements of the water industry and the constraints it faces;
b. It aims to follow the utility’s performance to check whether it fulfils the conditions specified by the current operating licence;
c. It will set up communication channels to enable smooth exchange of data and information;
d. It will encourage transparency of the utility in its dealing with the public;
e. It will aim to curb excessive bureaucracies when meeting consumer complaints;
f. It will ensure that the WSC gives a service that is worth its price and the customer gets value for money;

g. It will study WSC's proposals for the Customer Contract describing the levels of service in all its facets and the rights of the consumer;
h. It will initiate the process of setting up a customer charter.

The Directorate is also reviewing the operations of the Drainage Department now amalgamated with the Water Services Corporation and has commissioned a study to this effect. As a result the necessary institutional structures required to rationalise its operations as the responsible operator for the provision of sewerage services. It will also seek to develop an integrated structure for a single sewerage operator.

Where environmental regulation is concerned, the anomalous overlap between MEPA and MRA will be resolved, setting out modus-operandi for law enforcement, permitting and monitoring. A memorandum of understanding between the two institutions is currently being discussed and signed possibly before the end of 2003.

FUTURE TASKS

Malta's accession to the European Union is a primary target that places immediate obligations on the Directorate in view of the transposition of EU Directives, with special reference to observing the work programme as set in the timetable for the implementation of the Water Framework Directive. By the end of 2004 the Directorate will have completed the characterisation of all groundwater bodies and will be in an advanced stage in building the water catchments management plans.

The Directorate will also promote the necessary amendments to the MRA Act (Cap 423) to improve the legal power required for the effective control of groundwater abstraction. Technical expertise has been thus requested from FAO to assist in the legal review and drafting of a new groundwater legislation.

This request has been favourably accepted and a Technical Assistance project has been approved by FAO to assist Government in revising current legislation for groundwater management. FAO will also provide expertise for the review and analysis of policies in support of the management of a new groundwater allocation policy and new legislation. Core staff of the Directorate will be working with expert consultants for a period of nine months at the end of which a draft law will be submitted to Government.