



LIFE Integrated Projects 2016

**Optimising the implementation of the 2nd RBMP in the Malta River
Basin District**

LIFE 16 IPE MT 000008



Action C.17: Multi-Stakeholder Platform

6th Annual Report - 2023

1. Introduction

The multi-stakeholder National Water Table was established to increase stakeholder engagement. The lead beneficiary of Action C.17 is the Energy and Water Agency (EWA). The National Water Table is made up of participants from public funded entities, non-governmental organisations, and private sector entities. A list of entities involved can be found in Appendix I.

Biannual meetings are set up to ensure the establishment of a continuous consultation process through which stakeholders are involved in the development of approaches and measures required for the achievement of the Water Framework Directive's Environmental Objectives thus facilitating the acceptability and implementation of the 2nd River Basin Management Plan (RBMP)'s Programme of Measures.

The meetings provide a platform where the progress of both the LIFE Integrated and Complementary Projects are discussed along with a consultation platform for the development of the 3rd RBMP. The scope is to identify ways on how this implementation process can be optimised.

In 2023, the multi-stakeholder National Water Table was held on the 23rd May and on the 30th of November. Both meetings were held at Għajn Water Conservation Centre in Rabat, Malta.

2. Contribution to the 2nd and 3rd RBMP

The RBMP objective of Action C.17 is governance and capacity building. The multi-stakeholder platform aims to facilitate stakeholder understanding of the decision-making process to increase confidence in the institutions and establish ownership of policy formulation. All public organisations involved in the water management sector are required to provide stakeholders with sufficient information and incentives so that they can have an active participation in the development of sectoral policies. The draft plans of the 3rd RBMP were presented to the participants at the 11th Water Table Meeting and the participants were encouraged to submit their comments in writing to the Energy and Water Agency or the Environment Resource Authority. In these meetings the progress of both the LIFE Integrated and Complementary Projects is presented. The aims of these projects also mirror the aims of the 2nd RBMP programme of measures, hence, the active consultation in these meetings contribute also to consultation for the implementation of the 2nd RBMP.

3. Progress in Phase 3

3.1 10th Water Table Meeting (23rd May 2023)

The participants to the 10th Water Table Meeting were stakeholders from the public and private sectors, namely:

- Energy and Water Agency (EWA)
- Environmental and Resource Authority (ERA)
- Water Services Corporation (WSC)
- EcoGozo Directorate (MGOZ)
- Ambient Malta - Ministry for the Environment, Energy and Regeneration of the Grand Harbour (MEER)
- Information Management Unit (MEER - CIO)
- Public Works Department
- Directorate for the environment and climate change – (MEER)
- Environmental Health Directorate - Ministry of Health
- Project Green (MEER) – previously PARKS
- Transport Malta

- Rural Affairs Department (MAFA-AGR)
- Nature Trust Malta
- Malta Business Bureau
- Malta Chamber of Commerce
- Farmers Associations – KIM (*Koperattiva ta' min irabbi l-majjal- Pig breeding and raising cooperative*)
- Malta Chamber of SMEs

The first part of the meeting was dedicated to the presentation of updates on ongoing LIFE Integrated projects. Whilst the second part of the meeting was dedicated to complementary projects to the LIFE project. The meeting was concluded with an update on the progress and work programme for the publication of Malta's 3rd RBMP.

Three Integrated projects were presented, the first was on the demonstration site for the application of new water resources (Action C.6) presented by the EcoGozo directorate. The second presentation was an update on action C.14: Anchoring and mooring surveys presented by the Environment and Resource Authority. Stakeholders were interested in the legality of moorings and the publication of management plans and how these shall be updated to reflect these new studies. The third presentation was a study on the impact of brine discharges from reverse osmosis plants on the marine environment (action C.15); this project is being led by the Water Services Corporation. Participants were interested in the main outcomes of the project which includes a snapshot of the status of marine biodiversity in 2024, which will then be used as a reference point to compare to in the upcoming years. The reference point will be then used to gauge the impact of brine discharges on the marine environment. Additionally, stakeholders also discussed whether the increase in demand for Reverse Osmosis water would also be a factor to consider when looking into the impact of discharged brine since in future this may increase with the rise in demand.

The second part of the meeting focussed on Life Complementary projects. Project Green (previously PARKS) presented an update on Rainwiin; a rainwater harvesting project that has two main components; a planning framework to establish an integrated infrastructure network for rainwater management in five catchments in Malta and a pilot project. The participants were interested in the criteria utilised when deciding which dams will be considered in this project. The Rural Affairs Department presented and introduced: Agrihub; a project aimed at bringing about the next level of development in the agricultural sector. The stakeholders were keen to know whether the proposed mechanisms would eventually be made obligatory. The last project to be discussed was GIFLUID, presented by the Energy and Water Agency, which focuses on green Infrastructures to mitigate flood risks in urban and sub-urban areas and to improve the quality of rainwater discharges. The discussion afterwards focussed on green roofs; including their viability on different types of buildings, monetary incentives for the public and the comparison with other rainwater catchment systems.

The meeting was finalised by the EWA with an update on the progress of Malta's 3rd River Basin Management Plan. There have been several delays due to the difficulty in agreement on roles and responsibilities and the timing of the programme of measures since various public authorities are involved. However, even though the plan had not been finalised, in the meantime work on the projects and measures have continued.

Further details on what was discussed can be found in the minutes of the 10th meeting (Appendix II).



Fig.1 Presentation by the Environment and Resource Authority at the 10th Meeting of the National Stakeholder Water Table at Ghajn, Rabat

3.2 11th Water Table Meeting (30th November 2023)

The participants to the 11th Water Table Meeting were stakeholders from the public and private sectors, namely:

- EWA
- ERA
- EcoGozo Directorate (MGOZ)
- Department of Geosciences - UOM
- Ambient Malta- Ministry for the Environment, Energy and Regeneration of the Grand Harbour (MEER)
- Public Works Department
- Directorate for the environment and climate change (MEER)
- Project Green
- Nature Trust Malta
- Malta Chamber of Commerce
- Malta Regional Development and Dialogue Foundation

The 11th meeting of the multi-stakeholder National Water Table took place on the 30th of November 2023 at Ghajn Water Conservation Centre in Rabat. This meeting took a slightly different approach from the previous meetings, without presenting the Complementary Projects, but rather focusing solely on the 3rd RBMP. The EWA presented the status of groundwater followed by a presentation of the proposed measures. The recently proposed *Green Paper for the licensing of a groundwater abstraction framework* was also presented and discussed. Following this, the ERA presented the status of surface waters and the associated measures. The meeting was concluded with an update on the progress of the development of the 3rd RBMP and a request for stakeholders to participate in the public consultation.

Following the first presentation on the 3rd RBMP; focusing on groundwater and the relevant planned measures, participants had the opportunity to discuss and ask questions. Generally, participants were

interested in further information on the water balances, more specific data on use of groundwater and price of proposed measures. Such, details shall be provided in technical documents that shall support the RBMP.

The second half of the meeting focussed on surface waters which was presented by the Environmental and Resource Authority. The discussion pursued on the importance of transitional water bodies; with a spotlight on Ballut ta' Marsaxlokk. Participants also showed interest on pathways of emerging pollutants and the issue of determining the interface between springs and surface waters.

After both presentations, there was a lot of interest and discussion from the participating stakeholders. Additional information on the discussion points can be found in the minutes of the 11th meeting (Appendix III).



Fig.2 An overview of the 3rd RBMP presented by the Energy and Water Agency at the 11th Meeting of the National Stakeholder Water Table at Ghajn, Rabat

3.1 Further updates in phase 3

In phase 3, the action description was updated to reflect previous amendments including that meetings were being held bi-annually and not quarterly. Furthermore, the list of stakeholders was updated to reflect the official changes to the organisations' names. The 10th meeting was recorded as part of the requirements of LIFE action E5. All participants present signed the relevant consent forms to take part in the video. To date the final version of the video has not been published. The latter shall be followed up in 2024. The contract for the rental of conference tables for LIFE meetings was extended for another year until the 9th of November 2024, keeping the total amount to €1,652.

4. Conclusion

For the year 2023, both deliverables were met on time; and both meetings were held in person. The multi-stakeholder National Water Table meeting is expected to continue past the lifetime of the LIFE project. It has been successful in sharing progress on water related projects and obtaining input and feedback from stakeholders. Moreover, in 2023 it was also used as another contact point with stakeholders interested in water management, to give feedback on the third RBMP.

Appendix I

Members of the multi-stakeholder National Water Table

Leading Partner

Energy and Water Agency

Project Partners

Environment and Resources Authority

Water Services Corporation

EcoGozo Directorate - Ministry of Gozo

Department of Environmental Design (Faculty of the Built Environment) - University of Malta (UOM)

Department of Communication and Computer Engineering - UOM

Department of Geosciences - UOM

Information Management Unit - Ministry for the Environment, Energy and Regeneration of the Grand Harbour (MEER - CIO)

Project Green - MEER

Government or Publicly Funded Entities

Transport Malta

Ambjent Malta - MEER

Public Works Department

Environmental Health Directorate

Rural Affairs Department (MAFA-AGR)

Directorate for the environment and climate change - MEER

Ministry for Health

Non-Governmental/Voluntary Organisations:

Nature Trust Malta

Friends of the Earth Malta

Malta Business Bureau

Malta Chamber of Commerce

Farmers Associations - KPH

Farmers Associations - KIM

Farmers Associations - Mgarr Coop

Farmers Associations - Tadam

Farmers Associations - Viti Malta

Fisheries Association: Għaqda Kooperattiva tas-Sajd

Malta Regional Development and Dialogue Foundation

Private Sector Entities

Diving Associations

Malta Hotels and Restaurants Association (MHRA)

Malta chamber of SMEs

Appendix II



10th MEETING OF THE NATIONAL STAKEHOLDERS WATER TABLE

LIFE 16 IPE MT 000008

Optimising the implementation of the 2nd RBMP in the Malta River Basin District

23rd May 2023 14:00 – 16:30

Għajn National Water Conservation Centre, Rabat

1. Opening of the meeting

Energy and Water Agency

The 10th meeting of the National Stakeholder Water Table was opened on the 23rd of May 2023 at 2pm. The meeting was held at the Għajn National Water Conservation Centre in Rabat. This meeting is organised as part of the deliverables for action C.17 under the LIFE 16 IPE MT 000008 Project to increase stakeholder engagement. The lead beneficiary of Action C.17 is the Energy and Water Agency (EWA). The meetings provide a platform where the progress of both the LIFE Integrated and Complementary Projects are discussed with stakeholders from both private and public entities. Moreover, these meetings ensure a continuous consultation process throughout the implementation of the River Basin Management Plan (RBMP).

The first part of the meeting was dedicated to the presentation of updates on ongoing LIFE Integrated projects. Whilst the second part of the meeting was dedicated to complementary projects to the LIFE project. The meeting was concluded with an update on the progress of the development of the 3rd RBMP.

2. Demonstration Site for the application of new water resources (C.6)

The Ministry of Gozo (MGOZ)

The first presentation was delivered by The Ministry of Gozo on the LIFE Action C.6, which aims to use the New Water distribution point at the Government Experimental Farm in Gozo to conduct trials using different water mixes. Hence, a demonstration site is currently being developed at the Government Experimental Farm for the purpose of assessing the suitability of New Water in agricultural irrigation. The assessment will compare the effect of different sources of irrigation (rainwater, groundwater and New Water) on the following parameters, crop size, yield, taste, post-harvest deterioration.

A bi-partitioned reservoir for the storage of new water and groundwater and a fertigation room are also being constructed. The latter will house a new fertigation control system which will allow for the controlled assessment of different sources of irrigation on the crops.

3. Anchoring and Mooring Surveys (C.14)

The Environmental and Resources Authority (ERA)

The next presentation was on the Life Action C.14, which was presented by ERA. This action focusses on the sea floor and how it is being impacted by anchoring and mooring, which is one of the main pressures on the seabed. This action seeks to find knowledge gaps in this area and identify how anchoring and mooring impacts can be managed.

The action included five main activities:

Activity 1: Seasonal surveying and mapping of mooring/anchoring activities within Malta's territorial waters. As part of this activity, 33 sites were surveyed. The findings revealed that the most common boat type was for pleasure, whilst it was noted that the busiest bunkering area changes depending on the time of year.

Activity 2: Quantitative assessment of the impacts associated with different anchoring/mooring practices in relation to sensitive habitats. The impact assessment focussed on the most sensitive habitats including: *Posidonia oceanica*, biogenic reef and Maerl bed.

The project is still on-going, the upcoming activities are as follows;

Activity 3: Identifying management options as applicable to the different types of mooring/anchoring activity in relation to sensitive habitats together with the socio-economic assessment.

Activity 4: Localised implementation of selected management options on a pilot basis and associated monitoring.

Activity 5: Development of a long-term plan for extended implementation of proven management options.

The management strategies are planned to be implemented during 2024 and 2026.

3.1. Questions and comments

Was a correlation conducted between legal moorings and those found in this study?

This study took place in area without permanent registered moorings.

Will the management plans of these Nature 2000 sites be updated to reflect the new data collected?

Yes, anchoring and mooring is included in the management plans of Natura 2000 sites. And this new data will feed into those plans.

Where yacht marinas included in the surveys?

No, here the focus was on the impacts of anchoring and mooring not that of temporary berthing.

4. Study on the Impact of Brine Discharges from Reverse Osmosis Plants on the Marine Environment (C.15)

Water Services Corporation

The Water Services Corporation are currently conducting a 2-year study on the impact of brine discharge from Reverse Osmosis (RO) plants on the marine environment (Action C.15). The study

is investigating the brine discharge from the reverse osmosis plants of Pembroke, Lapsi and Ćirkewwa. The aim of the study is to develop monitoring programmes to ensure that the marine habitats close to the plants are being protected. Moreover, to ensure good quality seawater and bathing water.

Brine is a highly saline discharge (6 times the salinity of seawater content) that is created in the process of reverse osmosis and is discharged into the sea. Such a study will determine the extent of the impact on temperature, salinity, and turbidity with depth. A 3D map shall be created to visualise this impact. Samples of seawater are also being analysed for chemical parameters. Moreover, bioindicators are being used to monitor the impact on marine species, by quantifying and measuring the population and health of species and establishing control geolocations. Geolocations are used to monitor at the same location over different time periods. Marine transects on a line are conducted.

One preliminary result is that since brine is more concentrated, it falls to the bottom. Furthermore, depth and distance have a determining impact on marine life. One limitation is the weather since physical surveys cannot be conducted in bad weather. However, the study is on-going, and further results will be available at the end of the study.

4.1. Questions and comments

Are the different discharges in different areas being compared?

No, focusing on the discharge from RO.

What will be the outcome of the project?

First a snapshot of the status of the marine biodiversity in 2024, which will then be used as a reference point to compare to in the upcoming years.

If, a negative impact is found will the RO plants need to be modified to include an outflow like that at Hondoq?

This depends on the outcome, if the WSC finds that the discharge of brine is damaging the environment, WSC would need to consider measures that can be taken. However, an outflow is very expensive. At Hondoq the outflow was required due to the beach that is frequented by the public. This is not the case with other RO sites.

As population increases, the demand for output will increase and therefore the discharge will also increase, is this being considered?

The area of impact may increase; however, such monitoring programmes will provide the right data to check for this. Additionally, the flow of brine is being optimised.

Are the RO systems making use of renewable energy to produce water?

There is no renewable energy being used directly by the plant, however WSC has energy recovery devices to offset the energy being used. Additionally, a number of PVs have been installed on WSC reservoirs.

What is the timeline of this project?

The monitoring of the brine outfall will continue after the LIFE programme and any necessary action will be taken in the event that monitoring results indicate that environmental degradation is being experienced along the years.

5. RAINWIIN

Project Green

RAINWIIN is a complementary project to the LIFE Integrated projects. The lead partner of RAINWIIN is Project Green, which was previously known as Parks Malta. RAINWIIN is a rainwater harvesting project that has two main components; a planning framework to establish an integrated infrastructure network for rainwater management in five catchments in Malta and a pilot project.

The first component consists of a sediment quantification study, desktop studies and surveys, data collection and prioritisation exercises, a cost-benefit analysis and finally formulating designs and plans. This will consider 67 different reservoirs and 68 dams in Malta and an additional 4 reservoirs and 2 dams in Malta.

The second component consists of an excavation of a valley basin and construction of 6 water retention infrastructures. Restoration of one existing dam, planting of indigenous species, and collection of data (water level, weather). The pilot site chosen was Wied il-Għasel. The aim of the excavation is to increase the water harvesting capacity by 45,000 m³.

Moreover, Project Green are now in talks with the University of Malta to engage students to work on this project. Work is on-going in Għajn Mula and Wied il-Għajn, in collaboration with the beneficiary partner of this project; Public Works Department. Research from this project is aiding other projects in understanding the feasibility and the expertise required for future endeavours.

5.1. Questions and comments

What was the prioritisation criteria used when deciding on which dams shall be restored? Where habitats found in the dam considered?

The severity of the damage and the historical importance of the dam was considered. The structural integrity of the dam was considered rather than the habitats found.

Is the sediment excavated then used?

The sediment is then utilised in other open spaces including within new parks that Project Green is involved in. The possible contamination of these sediments is first considered. In fact, water samples are taken to test for salinity, nitrates and dissolved oxygen on a monthly basis. The sediment is first tested before distributing it.

For how long will the water harvested be retrieved?

This depends on the infiltration rate of the system.

Is Mistra bay dam being considered?

Not as part of this study, however, other sites are being considered.

What is the timeline of the Rainwin project?

The original duration of the project was planned to finish this year however, an extension is being considered for another two months. Moreover, monitoring will continue after the project ends.

6. Agriculture Research and Innovation Hub (Agrihub)

Rural Affairs Department (MAFA-AGR)

The Rural Affairs Department presented their 2.3 million euro project which is also a complementary project to the Life Project. The timeline of the project is from December 2020 to March 2024; however, this may be extended. The project aims to bring about the next level of development for the agricultural sector.

The main three areas of this project are: Research and Development, Agricultural Reform, and Farmer Support. Agricultural Reform is prioritising knowledge exchange between farmers and the public sector whilst Farmer Support aims to bridge the gap between research and implementation. Moreover, the project aims to build a community of participating farmers.

The Research and development element of this project is split into four main areas: incorporation of information technology within a traditional agricultural sector whereby pest monitoring stations equipped with AI are being developed. Secondly, developing new strategies for improving the production of good quality fodder for livestock via fodder trials. Thirdly, the development of pest prediction models. The latter considers the use of soil sensors and weather stations to obtain data on how pest populations react to environmental conditions. Hence, a model shall be developed to determine when the likelihood of a pest attack is at its highest and therefore determine the most suitable time or pesticides to be used. The latter will also take into consideration when the pest is at its weakest so that the pesticide will be the most effective. The last component is the Integrated Pest Management Guidelines; these are booklets containing guidelines on the most common pests and diseases for several crop types. Moreover, the effectiveness of these guidelines shall also be monitored.

6.1. Questions and comments

Are these knowledge exchange mechanisms already in place?

Agriconnect is already established, as an extension of the agricultural services provided.

Is there a plan for the integrated pest management (IPM) to become obligatory?

Not directly, the plan is for farmers to be eligible for other funds and schemes they would also need to be IPM compliant. The guidelines also give organic alternatives to pesticide application and clarify the legal and illegal practices. The idea of being IPM compliant is in discussion.

7. GIFLUID

Energy and Water Agency

The last presentation was presented by the Energy and Water Agency on the complementary project: Green Infrastructures to mitigate flood risks in Urban and sub-urban areas and to improve the quality of rainwater discharges (GIFLUID).

An update on this on-going project was given which detailed the most recent work and findings on the study. The project aims to develop and promote practical tools which integrate the planning and design of Green Urban Infrastructures (GUIs) in critical urban areas of Malta and Sicily. Three of the GUIs being considered are green roofs, rain gardens, and porous pavements.

Hydrological and hydraulic modelling is being conducted to assess the GUIs application via a GIS-based model. A masterplan shall be created as a tool to facilitate the implementation of the EU's Floods Directive. Various local interventions of GUIs are being considered, one being a green roof at Għajjn which shall be used for demonstrations. Digitally superimposed models are being used to develop depth maps, flow velocity and hazard mapping. The flood risk is then being considered post identifying the level of exposure and the receptors at risk. Furthermore, a CBA shall be included to understand the optimal inclusion of GUIs.

7.1. Questions and comments

Considering the weight of green roofs, is it common to have buildings that can support it?

Only new buildings will be able to support it however, this is also dependent on the growing medium being used. Hence, this is also being studied further, also here at the Għajjn Water Conservation Centre.

Will there be monetary incentives for green roofs?

Public and private areas are being targeted, with the CBA, the different scenarios shall be monetised. Hence, with this data, we can have useful tools to develop a policy paper for people to then apply.

Can green roofs be incorporated with PV panels?

This is being tested here, at Għajjn as a pilot project, sensors are in place to understand how green roofs and PV panels work together.

When considering private buildings, are you also considering the number of floors that have been built?

At this point of time, we are just considering whether the buildings are new or not. However, considering whether there is enough airspace to build a green roof is a good point that may need to be considered if the data is available.

Are you considering 100% of the roof to be used for the green roof?

The services on the roof have also been considered.

Which would you consider more effective for the use of a roof; the green roof or the rainwater catchment system?

A combination of both is best, the green roof is effective to combat floods whilst the catchment system is optimal for storage of water to be used at a later stage.

8. Update on the progress and the work programme for the development of Malta's 3rd River Basin Management Plan

Energy and Water Agency

Malta's 3rd River Basin Management Plan shall be applicable for the period of March 2021 to March 2027. The programme of measures being drafted involves many different public authorities. Hence, there have been several delays due to the difficulty in agreement on roles and responsibilities and the timing of these measures. However, even though the plan has not been finalised, in the meantime work on the projects and measures have continued. Currently the third RBMP is in the stage of finalising the list of measures that can be implemented. Once the first draft is finalised it shall be made available for public consultation following which it will be sent to the EU Commission. Such meetings are important for public entities to share their work and promote upcoming projects.

9. Conclusion

The next meeting is planned to take place in November 2023. A list of participating entities can be found in Annex 1.

Annex I

List of participating entities who were present:

Energy and Water Agency
Environmental and Resource Authority
Water Services Corporation
EcoGozo Directorate (MGOZ)
Information Management Unit (MEEE - CIO)
Ambjent Malta (MEEE)
Public Works Department
Directorate for the environment and climate change – (MEEE)
Environmental Health Directorate - Ministry of Health
Project Green (MEEE)
Transport Malta
Rural Affairs Department (MAFA-AGR)
Nature Trust Malta
Malta Business Bureau
Malta Chamber of Commerce
Farmers Associations - KIM
Malta Chamber of SMEs

Appendix III

11th MEETING OF THE NATIONAL STAKEHOLDERS WATER TABLE

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However, this Water Table meeting took a slightly different approach from the previous meetings, without presenting the Complementary Projects, but rather focused solely on the 3rd RBMP. After the introduction, EWA presented the status of groundwater followed by a presentation of the proposed measures. Following this, ERA presented the status of surface waters and the associated measures. The meeting was concluded with an update on the progress of the development of the 3rd RBMP.

2. Status of the Groundwater Bodies

Energy and Water Agency

The presentation outlined Malta's groundwater bodies, and how the current use of the groundwater bodies is exacerbating an imbalance between recharge and abstraction, posing significant challenges to the sustainable management of this vital resource. It is for this reason that the ongoing water level monitoring has been a crucial aspect in determining the quantitative status of groundwater. However, the agency has taken significant strides in 2023 by augmenting the number of monitoring stations in both Malta and Gozo, with a total of 12 sites in the perched aquifers. Notably, the information presented in the 3rd River Basin Management Plan (RBMP) predates these updates. Over the past 20 years, a noticeable and statistically significant downward trend in water levels has been observed in most instances. Recognizing that water level alone may not provide a comprehensive assessment, the agency is extending its focus to the interface between freshwater and seawater, surpassing the requirements of the Water Framework Directive (WFD).

This comprehensive analysis also extends to water quality, with monitoring since 2009. Quality assessment is conducted in adherence to the threshold values outlined in the Groundwater Directive, with variations based on background levels specific to each groundwater body type. The examination encompasses key parameters such as conductivity, nitrates, nitrites, chlorides, sulphate, sodium, and boron. Notably, nitrates emerge as a primary concern, with a nuanced perspective revealing a lack of

clear trends in most groundwater bodies, although slight improvements are attributed to policy interventions. Chlorides exhibit a mixed performance across monitoring stations. Other parameters including arsenic, fluoride, zinc, ammonium, and copper demonstrate no exceedances. The agency recognizes the importance of continuing monitoring efforts beyond 2021, ensuring a comprehensive understanding of groundwater quality trends for the subsequent cycle post-2027.

3. 3rd RBMP Groundwater Proposed Measures

Energy and Water Agency

To tackle the issue of safeguarding groundwater, a comprehensive set of proposed measures has been created. A focal point in this initiative is the recently launched green paper on "the regulation of groundwater abstraction in the Maltese Islands," with a particular emphasis on the fact that 83% of agricultural water supply is sourced from groundwater. Noteworthy, is the reduction in public groundwater abstraction, alleviating pressure on this vital resource. Private abstraction, predominantly by the agriculture sector (76%), commercial entities (16%), and domestic use (8%), has prompted the green paper's holistic proposals. These include the introduction of licenses with defined terms and conditions reflective of groundwater status and climate change considerations. The overarching goal is not to curtail groundwater usage but to incentivise its sustainable utilisation. Proposed sector-specific measures involve quota-based systems for agriculture, tariffs for commercial users, and higher domestic tariffs compared to the Water Services Corporation. The exclusion of tariffs for spring use and hand dug wells (spieri) is also outlined. Parallel to this regulatory framework are programs promoting efficiency and sustainability, including technical advice, audits, and financial schemes. The broader Programme of Measures encompasses initiatives to enhance energy efficiency in water production facilities, expand spatial distribution of water abstraction to minimise localized impacts, improve wastewater infrastructure, and promote efficient water use through activities such as rainwater harvesting and greywater recycling. Additionally, collaborative efforts for valley rehabilitation and ongoing projects like managed aquifer recharge in Pwales contribute to the multifaceted approach, all underpinned by an intensified focus on hydro-geological monitoring enhancements.

3.1 Questions and comments

During the start of the discussion, praise was received for the publication of the *Green Paper for the licensing of a groundwater abstraction framework*. Following this, the questions asked are listed below:

Water balances have remained the same since the previous RBMP, how is this possible?

There is a grey area in some instances, with regards to the abstraction in certain sectors. The technical documents that will be uploaded online, will further explain these issues.

Agricultural use of groundwater is listed in percentages within the green paper, which is difficult to gauge. Is the time series for specific parameters? Ammonium in Nadur has spiked, how has it changed over the years, and what measure will address this?

Information is listed in percentages rather than quantities (in the green paper), but the more technical paper will go in further detail of the quantities. An exceedance of a pollutant at one monitoring point (Nadur exceedance in ammonium), may not be reflective of the whole groundwater body.

Are new pollutants such as PFAS and microplastics being addressed?

PFAS monitoring has been ongoing since, 2019, in 2022 the amount of PFAS substances tested for was increased. It is now included in the operational monitoring every 6 months. Regarding the presence of other pollutants, the technical document will go into further detail. Microplastics are not yet tested but will be included in future as part of the contaminants of emerging concern, however, currently the method of testing for microplastics is still being looked at.

There is an attempt to enforce against illegal boreholes, however a lot of irrigatable land has no registered water source, what is the reason for this?

We agree that there is the need for a regulatory framework, and in fact this is being set up by ERA, however it is a challenging process.

What about the price associated with these proposed measures and the status of the measures from the 2nd RBMP?

Additional technical documents will provide more detail on the chapters already submitted, and the cost associated with each measure. Moreover, the status of the measures of the previous RBMP are explained in chapter 8, which is online. Additionally, some measures are repeated; either due to the measure being of a long-term, or due to delays in their implementation, or if a measure has worked, it is going to be repeated.

Is there any monitoring for the correlation between rainwater and groundwater level?

Technically, there should not be a direct relationship between groundwater level and rainwater, due to the recharge time lag. However, this may be still considered, due to periods of drought leading to less recharge events. Therefore, it is something to consider, seeing as in future there may be periods of a reduction in water level (hence the need for a reduction in abstraction).

4. Status of the Surface Waters

Environment and Resources Authority

A comprehensive overview of the qualitative status of surface waters in the Maltese Islands was presented, outlining key considerations and challenges. The 10 inland surface water bodies are comprised of rivers (**watercourses**) including Wied tal-Baħrija, Wied il-Luq and Wied tal-Lunzjata (Gozo), lakes (**pools**) including I-Għadira ta' Sarraflu and il-Qattara and **transitional water bodies**, is-Salini, il-Magħluq (Marsascalea), il-Ballut (Marsaxlokk), is-Simar and I-Għadira. ERA's remit also extends to nine coastal water bodies.

The WFD seeks the achievement of good ecological and chemical status of inland surface waters, transitional waters and coastal water bodies. Since most of Malta's inland water bodies are heavily modified, the requirement for such water bodies is the achievement of good ecological potential rather than good ecological status.

Challenges arise from the unique characteristics of Malta's ecological systems, making it difficult to apply monitoring/assessment methodologies established for other Mediterranean countries. While coastal water bodies are better understood, the lack of reference conditions and ranges/standards pose challenges for inland surface water bodies. Monitoring data collected to date and application of assessment methodologies employed by other EU countries imply that, in general, inland surface

water bodies are in a poor or bad ecological status/potential. All ten inland surface water bodies also failed chemical status, noting however that an exceedance of the threshold concentration (Environmental Quality Standard) by one pollutant, would result in a bad chemical status. While most coastal waters are in good chemical status, inland surface water bodies face challenges with exceedances of DEHP, heavy metals and PAHs.

5. 3rd RBMP Surface Waters Proposed Measures

Environment and Resources Authority

A set of proposed measures relating to the protection of surface water has been outlined. The focus on wastewater treatment and distribution infrastructure includes plans for the upgrading of urban wastewater treatment plants, enhancing the efficiency of sewerage networks, and addressing issues related to sewage overflows. Water management in urban environments is targeted through the implementation of sustainable urban drainage systems and natural water retention measures. Tackling contaminants of emerging concern involves the introduction of an integrated pest management scheme, comprehensive risk assessments for contaminants, and improvements to the environmental permitting system. A vital aspect of the proposed measures is the effective use of fertilizers, notably through the Nitrates Action Programme. The status of surface waters is addressed through initiatives for the restoration of inland surface and transitional water bodies, as well as the management of pressures arising from boating activities. Furthermore, combatting marine litter involves a strategic educational campaign aligned with the objectives of the Single-Use Plastic Products Strategy for Malta 2021-2030. There is the need for more Environmental Quality Standards (EQS) through research and innovation underscores the commitment to the preservation and enhancement of surface water quality in the Maltese Islands.

5.1 Questions and comments

Has the use of Sustainable urban drainage systems started?

Yes, this has started under the LIFE IP project – pilot project under Action C.7.

One of the important things, is to reach good ecological status. Major infrastructural works need to take place to ensure protection of transition water bodies, for example at Ballut ta' Marsaxlokk. One way of doing this is to establish proper connection to the sea. Is this being done?

For il-Ballut ta' Marsaxlokk, there is another LIFE IP project that is looking at the most urgent needs of the site. The need to restore the hydrological conditions of the site is an important aspect for achievement of WFD objectives. What we'll learn from this project at il-Ballut can be used for other transitional waters, including il-Magħluq.

Have pathways of emerging pollutants been looked at?

Not yet; there is another Life IP project focussing on emerging pollutants and the next step would be to assess pathways of contamination to regulate the source.

Most springs are privately owned, and if we attempt to restore them, we need to have some flow for the ecosystem. However, without proper regulation and enforcement of these springs, other agencies (such as Ambjent Malta) are unable to carry out their measures. Where is the interface between springs, and surface waters?

A holistic approach towards restoration is necessary, including consideration of the links between springs and surface water flows. However, there are knowledge gaps in this regard, which we acknowledge, and which need to be addressed.

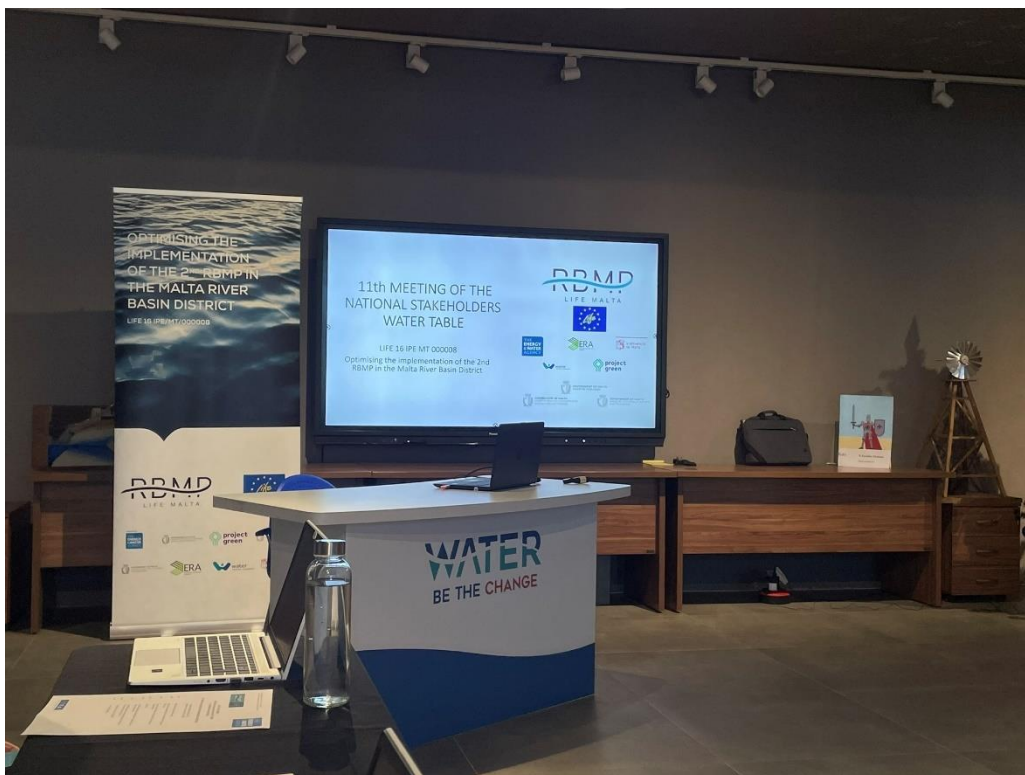
Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) regulation and consideration of lead has not been included in the Programme of Measures.

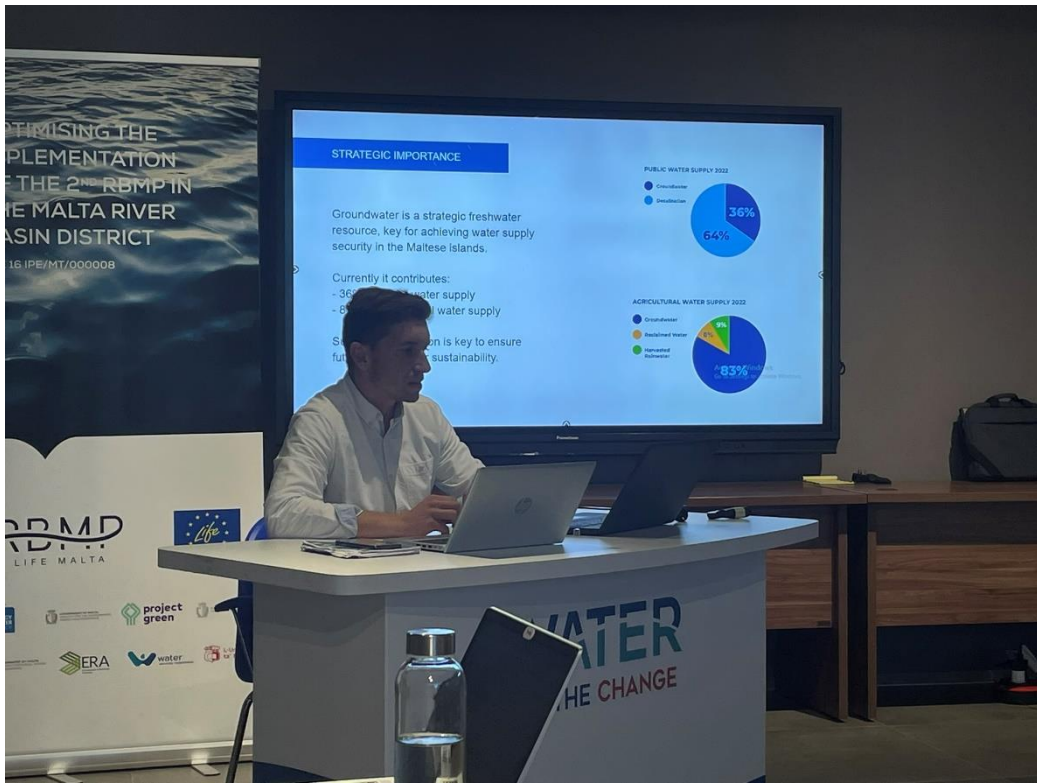
The matter is still under discussion.

6. Conclusion

The 11th Meeting of the National Stakeholders Water Table provided valuable insights into the status of groundwater and surface waters in the Maltese Island. The detailed discussions on the 3rd River Basin Management Plan (RBMP) for both groundwater and surface waters, along with the proposed measures, set the stage for an active participant discussion. Participants were also invited to submit their comments in writing, through the EWA and ERA online pages, on the draft chapters of the RBMP. The link to the public consultation on EWA's page is: <https://energywateragency.gov.mt/integrated-river-basin-management/> whilst it can also be found on ERA's page here: <https://era.org.mt/public-consultation-maltas-third-river-basin-management-plan-pursuant-to-the-water-framework-directive-2000-60-ec/>. The deadline for the public consultation is on the 18th of March 2024. The list of participating entities in this meeting can be found in Annex 1. The next meeting is scheduled to be held in May 2024.

Photos





Annex I

List of participating entities who were present:

Energy and Water Agency
Environmental and Resource Authority
EcoGozo Directorate (MGOZ)
Department of Geosciences - UOM
Ambjent Malta (MEER)
Public Works Department
Directorate for the environment and climate change (MEER)
Project Green (MEER)
Nature Trust Malta
Malta Chamber of Commerce
Malta Regional Development and Dialogue Foundation