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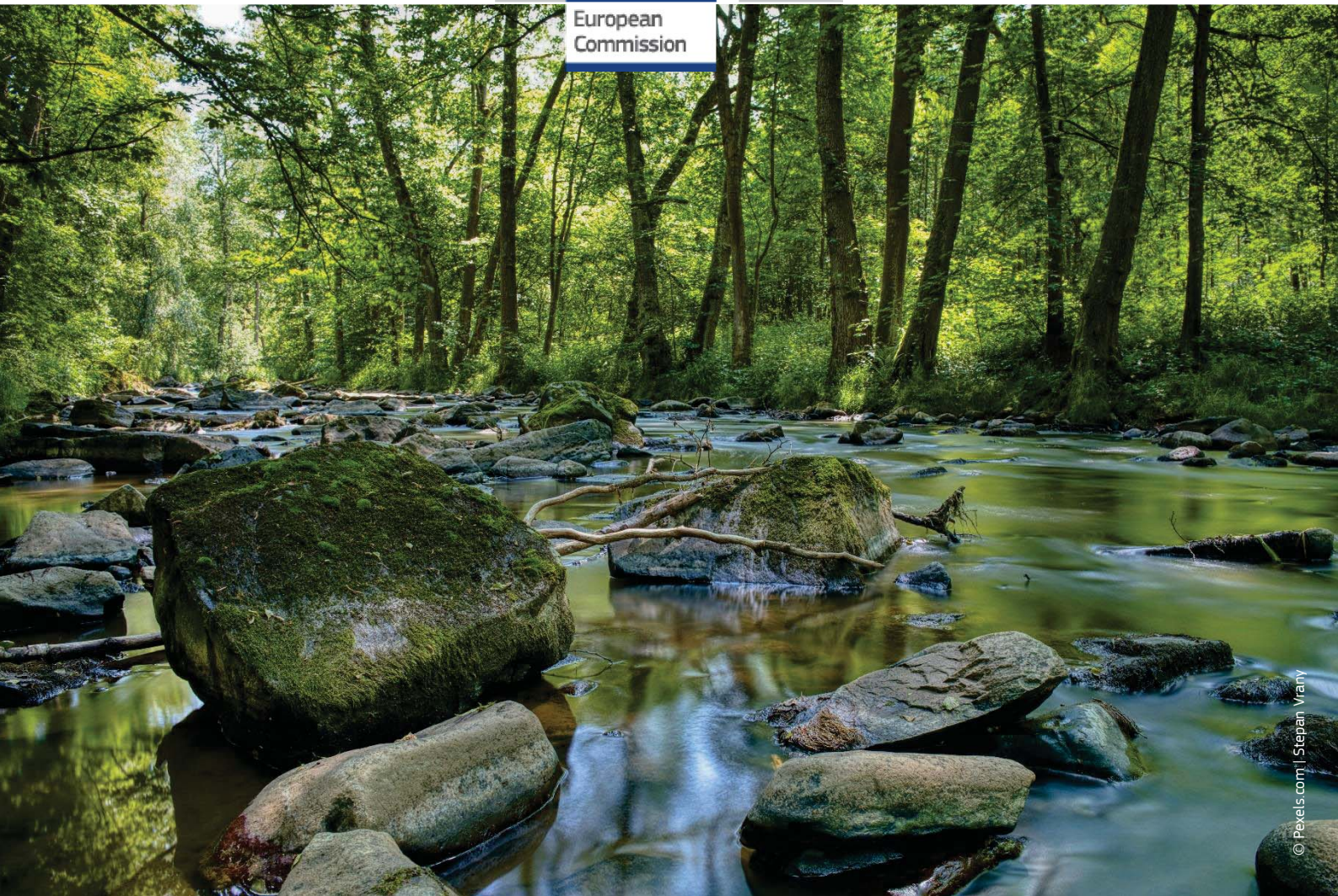
**Third River Basin Management Plans Second Flood Hazard and Risk Maps and
Second Flood Risk Management Plans
Member State: Malta**

Accompanying the document

**REPORT FROM THE COMMISSION TO THE COUNCIL AND THE EUROPEAN
PARLIAMENT**

**on the implementation of the Water Framework Directive (2000/60/EC) and the Floods
Directive (2007/60/EC)
Third River Basin Management Plans
Second Flood Risk Management Plans**

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Country specific staff working document

Malta



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SECTION A:

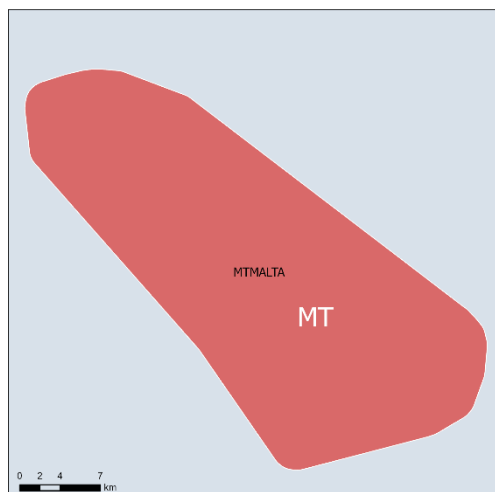
WATER FRAMEWORK DIRECTIVE

1. General info, member state characterisation

Malta consists of the three islands Malta, Gozo and Comino, has a population of 588 254 inhabitants and a population density of 1,867 people per km² (numbers from 2025¹) the highest in the EU and one of the highest in the world. During peak holiday months, the total number of people on the islands increases by roughly 80 000 (14%)².

Malta has identified one River Basin District (RBD), which covers the whole country's territory with 20 surface water bodies and 15 groundwater bodies.

Average annual rainfall is about 508 mm and rainfall is highly variable, making water supply a perennial problem. Climate change is projected to reduce overall rainfall while increasing the intensity of extreme rainfall events. Rapid population growth and expanding tourism lead to increased water consumption. Consequently, Malta is one of the top ten water-stressed countries in the world and is the second most water-stressed country in the EU, after Cyprus.



Due to the country's small size and dense population, Malta's land use is dominated by high urbanisation and extensive built-up areas. Malta's agriculture is characterised by small and micro-sized farm holdings with fragmented parcels. The country's unique characteristics limited agricultural land and lack of natural resources make it dependent on imports. There are more than 10 400 farms in Malta, 90% of which are smaller than two hectares. Malta has the lowest proportion of organic farming in the EU.

Table 1. Overview of Malta's RBDs

RBD	Name	Size (km ²)
MTMALTA	Malta	714.818

Reporting

The deadline for reporting the third River Basin Management Plans (RBMPs) was March 2022. The Commission and the European Environment Agency (EEA), together with Member States, developed a voluntary electronic reporting system in WISE (Water Information System for Europe). Some Member States submitted their plans using this system, while others submitted them in pdf format.

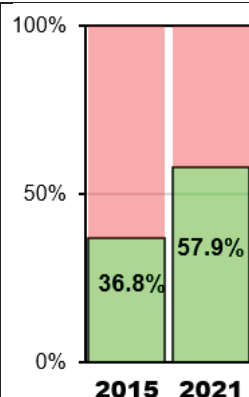
All three of Malta's islands are assigned to a single river basin district (MTMALTA). A single national RBMP for Malta was published in March 2024, accompanied by WISE e-reporting. However, Malta did not consult on, adopt or report the RBMP in line with the WFD timetable.

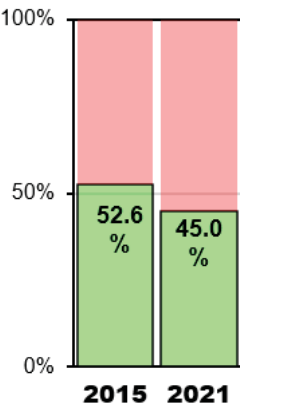
The relevant documents have been made available on the European Environment Agency (EEA's EIONET Central Data Repository: <https://cdr.eionet.europa.eu/>.

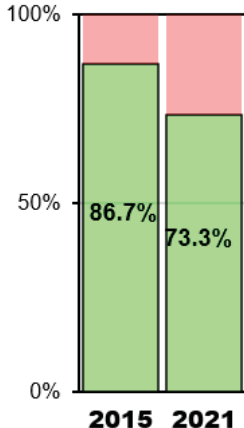
¹ NSO Malta | Selected Indicators - NSO Malta

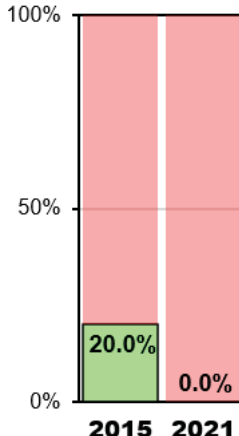
² NSO Malta | Census of Population and Housing 2021: Final Report: Dwelling Characteristics - NSO Malta

Changes in Status, Pressures, Exemptions & Measures

Surface Water Bodies	Trend (% good status/potential)	Main Pressures & Changes & Exemptions						
The total number of surface water bodies (SWBs) has increased slightly since the second RBMP, from 19 to 20 (due to the addition of one territorial water body).								
ECOLOGICAL STATUS	 <table><thead><tr><th>Year</th><th>% good status/potential</th></tr></thead><tbody><tr><td>2015</td><td>36.8%</td></tr><tr><td>2021</td><td>57.9%</td></tr></tbody></table>	Year	% good status/potential	2015	36.8%	2021	57.9%	Overall, the ecological status in Malta has improved: 57.9% of SWBs were in a good or high ecological status in 2021, up from 36.8% in 2015. The percentage of SWBs with an unknown ecological status has fallen from more than 50% in the second RBMP to 0% in the third RBMP. At the same time, confidence in the status of water bodies with an attributed status has fallen from high to moderate. Despite inaccuracies in electronic reporting that could lead to different interpretations, Malta confirmed after the third RBMP that (1) all physico-chemical quality elements are monitored in all surface water body categories; (2) all required biological quality elements are monitored in all surface water categories, except where not relevant; and (3) all hydromorphological quality elements are monitored, except for the tidal regime in transitional and coastal waters. All SWBs are subject to surveillance monitoring. Those at risk of failing to reach good status are subject to operational monitoring. The third RBMP reports that the main pressures come from diffuse pollution associated with urban run-off (55% of water bodies), transport (50%) and agriculture (15%). The second RBMP indicated that the main anthropogenic pressures identified for SWBs were other point source pollution and other diffuse pollution (both at 47%). By 2027, 63.2% of SWBs are expected to achieve good status. A time-extension exemption has been applied to 50% of SWBs on the grounds of natural conditions (Article 4(4)).
Year	% good status/potential							
2015	36.8%							
2021	57.9%							

CHEMICAL STATUS	 <table><thead><tr><th>Year</th><th>Proportion of SWBs in good chemical status (%)</th></tr></thead><tbody><tr><td>2015</td><td>52.6%</td></tr><tr><td>2021</td><td>45.0%</td></tr></tbody></table>	Year	Proportion of SWBs in good chemical status (%)	2015	52.6%	2021	45.0%	Compared with the second RBMP, the proportion of SWBs in good chemical status in Malta decreased from 52.6% to 45.0%. However, this decrease seems to be due to methodological, assessment or monitoring changes rather than actual environmental deterioration. Confidence in status assessments has remained 'medium' for all SWBs. However, 16 priority substances, including POPs and pesticides, are not monitored. The substances most frequently causing failure were DEHP (45%), lead (40%), and nickel (35%), none of which are classified as ubiquitous, persistent, bioaccumulative and toxic (uPBT). Of the top ten substances causing failure to achieve good chemical status, three are uPBT substances, albeit further down the top ten list. These are brominated diphenyl ethers (25%), fluoranthene (5%) and benzo[a]pyrene (5%). In the second RBMP, mercury was the only substance causing failure. Since then, the status of inland and coastal waters has reversed: for all coastal waters it changed from 'not good' to 'good', while for inland waters it changed from 'good' to 'not good'. The expected chemical status in 2027 shows no change from the current state in the third RBMP. Malta has planned measures to tackle chemical pollution, mainly under two Key Type Measure (KTM) categories: KTM15 (Measures for the phasing-out or reduction of Priority Substances) and KTM21 (Measures to prevent pollution from urban areas, transport and built infrastructure). Gap indicators have been provided. A time-extension exemption has been applied to 50% of SWBs on the grounds of natural conditions (Article 4(4)).
	Year	Proportion of SWBs in good chemical status (%)						
	2015	52.6%						
2021	45.0%							

Ground Water Bodies	Trend (% good status/potential)	Main Pressures & Changes & Exemptions						
The number of groundwater bodies (GWBs) has remained unchanged, at 15 GWBs.								
QUANTITATIVE STATUS	 <table><tr><th>Year</th><th>% good status/potential</th></tr><tr><td>2015</td><td>86.7%</td></tr><tr><td>2021</td><td>73.3%</td></tr></table>	Year	% good status/potential	2015	86.7%	2021	73.3%	There has been a decrease Since the second RBMP, the percentage of GWBs with a good quantitative status has decreased from 86.7% to 73.3% due to overabstraction. As in the second RBMP, confidence in all status assessments is high. However, it should be noted that Malta does not consider saline or other intrusions in the quantitative status assessment. Eight out of 15 GWBs are not subject to quantitative monitoring (i.e. 53.3% of the total GWBs and 85.5% of the total GWB area). In this reporting cycle, the water balance / lowering of the water table was reported as the reason why 26.7% of GWBs failed to achieve good quantitative status. This represents an increase from 2 GWBs in poor quantitative status in the second RBMP to 4 in the third RBMP, indicating an overall deterioration. Groundwater associated aquatic ecosystems (GWAAEs) and groundwater-dependent terrestrial ecosystems (GWDTEs) have been considered in the assessment. All GWBs are expected to be in good status in 2027. Two are at risk of failing. Malta has mapped measures and provided gap indicators for several abstraction pressures (P3) and for the alteration of water levels or volumes and the KTMs used to address them. Measures related to e-flows have not yet been identified. The measures in the third RBMP focus on increasing the water supply, specifically relating to natural water retention measures, rainwater harvesting, desalination and water reuse. A time-extension exemption has been applied to two GWBs (13.3%) due to natural conditions (Article 4(4)). Less stringent objectives have been set for two GWBs (13.3%) in the current planning cycle on the grounds of infeasibility (Article 4(5)).
	Year	% good status/potential						
	2015	86.7%						
	2021	73.3%						

CHEMICAL STATUS	 <table><tr><th>Year</th><th>Good Chemical Status (%)</th></tr><tr><td>2015</td><td>20.0%</td></tr><tr><td>2021</td><td>0.0%</td></tr></table>	Year	Good Chemical Status (%)	2015	20.0%	2021	0.0%	Overall, there has been a decrease in chemical status in the third RBMP compared with the second RBMP: no GWBs had a good chemical status in 2021, while a fifth of GWBs had a good chemical status in 2015. Fifteen GWBs (i.e. 100.0% of total GWBs assessed) are subject to chemical monitoring, similarly to the second RBMP e-reporting. In the third RBMP, all groundwater chemical status classifications have been made with high confidence, as was the case in the second RBMP. The two reasons for failures in chemical status are ‘general water quality assessment’ (100% of GWBs) and ‘saline or other intrusion’ (46.7%). The top three pollutants causing failures are nitrates in 80% of GWBs, chloride in 73.3% and sodium in 53.3%. Groundwater associated aquatic ecosystems (GWAAEs) and Groundwater dependant terrestrial ecosystems (GWDTEs): 13 GWBs (i.e. 86.7% of total GWBs) are expected to fail to achieve good chemical status by 2027. A time-extension exemption has been applied to 12 GWBs (80.0%) due to natural conditions (Article 4(4)). Less stringent objectives have been set for 3 GWBs (20%) in the current programming period on the grounds of infeasibility (Article 4(5)).
	Year	Good Chemical Status (%)						
2015	20.0%							
2021	0.0%							

2. Horizontal aspects



2.1 Governance

The Environment and Resources Authority (ERA) and the Energy and Water Agency (EWA) are responsible for Malta's third RBMP, under the oversight of an Inter-Ministerial Committee on Water. A total of 17 public entities participate in water management with specific roles, but the relationship between the Inter-Ministerial Committee and other organisations and the coordination mechanism are unclear and are not detailed in the RBMP. Regrettably, the third RBMP lacks a summary of the public consultation.

Malta has reported in a specific section of the Flood Risk Management Plan (FRMP) on how the Floods Directive (FD) and WFD implementation is coordinated, and in particular on how measures are aligned between the Programme of Measures (PoM) and the FRMP. However, details on specific coordination aspects such as risk assessment are lacking. Efforts to improve stormwater monitoring through Sustainable Urban Drainage Systems (SuDS) and Nature-Based Solutions (NBS) are underway, building on the National Flood Relief project. Joint public consultations were planned in 2021, but the compliance status remains unclear³.

Although alignment with the Marine Strategy Framework Directive (MSFD) is expected, details on MSFD implementation and integration into the RBMP are limited. The PoM includes measures such as substance risk assessments, education on plastics and boating management, but further information is needed on coordination between MSFD and RBMP, particularly with regard to consultation, delineation and prioritisation.

The coordination and integration between the WFD, FD and MSFD remain insufficiently described. Malta did not consult on, adopt or report the RBMP according to the WFD timetable.



2.2 Characterisation of River Basin District

Water bodies

In Malta, there are a total of 20 surface water bodies. The inland surface waters and transitional waters in Malta are very small streams, watercourses and standing waters with water levels that fluctuate throughout the year. The three river water bodies are unique in that they are temporary, whereas the two lake water bodies are permanent small pools. There are a total of 15 groundwater bodies.

Table 1. Water bodies delineated in Malta

RBD	Name	Rivers	Lakes	Transitional	Coastal	Territorial	Groundwater
MTMALTA	Malta	3	2	5	9	1	15

Source: WISE electronic reporting.

³ Third RBMP, Section 8.3 Table 55 (p. 129).

Main pressures and impacts

The main pressures affecting inland surface and transitional waters in Malta are diffuse pollution (from agricultural and urban sources), hydromorphological alterations (for agricultural and other purposes), and invasive alien species (including the widespread distribution of the Asian Great reed (*Arundo donax*)). Coastal water bodies are mainly affected by point source pollution pressures.

The total agricultural area of Malta is 10 700 hectares, representing 34% of the total land area. Only 66 hectares (less than 1%) of this agricultural area was managed organically in 2022, well below the EU average⁴. Diffuse pollution from agriculture accounts for 78% of diffuse pollution affecting inland and transitional surface water bodies. Diffuse pollution from agriculture is assessed using two criteria: (i) if more than 40% of the land is used for agriculture, and (ii) if nitrate levels exceed 50 mg/l.

According to Malta's 2022 reporting under the Urban Waste Water Treatment Directive (UWWTD), only 7% of urban wastewater in Malta is treated in accordance with the Directive's requirements (Figure 4). In October 2024, the European Court of Justice ruled in a judgment (case C-304/23) on the agglomerations of Malta South and Malta North that Malta had failed to take the necessary measures to ensure that urban wastewater was subject to secondary treatment or equivalent before discharge. For Malta North, this also includes discharges into sensitive areas or their catchment areas. Malta has also failed to monitor discharges of urban wastewater from agglomerations.

Since the second RBMP, Malta has improved its understanding of the effects of significant pressures on the ecological status of surface water bodies. For surface water bodies, the most significant pressures are diffuse pollution from urban run-off and transport, affecting 55% and 50% respectively (Figure 1). It is worth noting that knowledge of the pressures has increased considerably: for the second cycle, the anthropogenic pressures were unknown for all the surface water bodies, whereas for the third cycle, all pressures are known.

The main significant impacts on surface water bodies are chemical and nutrient pollution affecting 53% and 16% respectively (Figure 2).

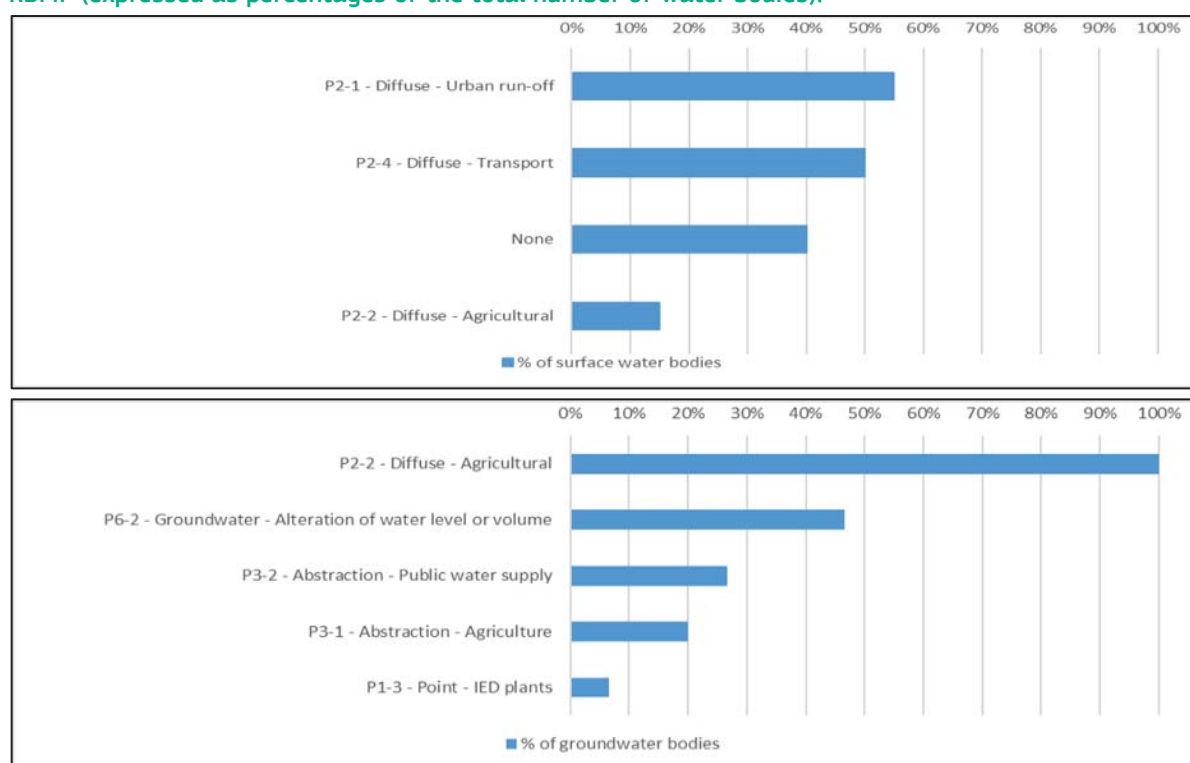
Pressures on groundwater bodies are linked to identified drivers and are not reported as unknown. For groundwater bodies, the most significant pressures are diffuse pollution from agricultural sources affecting 100% (Figure 3a) and contributing to eutrophication (Figure 3b), alteration of groundwater levels affecting 47%, and abstraction for public water supply and agriculture affecting 27% and 20% respectively, (Figure 1). The main significant impacts on groundwater bodies (numbers) are chemical pollution (100%), lowering of the water table affecting (33%) and saline intrusion affecting (20%, Figure 2).

Groundwater bodies vary considerably in size. If we consider the proportion of the groundwater body area⁵, rather than the number of water bodies, the figures become even more significant. The most significant pressures on groundwater bodies, as a proportion of their area, are diffuse pollution from agricultural sources affecting (100%), alteration of groundwater levels affecting (85%), and abstraction for public water supply and agriculture affecting (93%). The main significant impacts, when looking at the proportion of the groundwater body area, are chemical pollution affecting (100%), lowering of the water table is affecting (84%) and saline intrusion affecting (83%).

⁴ [At a glance: Malta's CAP Strategic Plan](#)

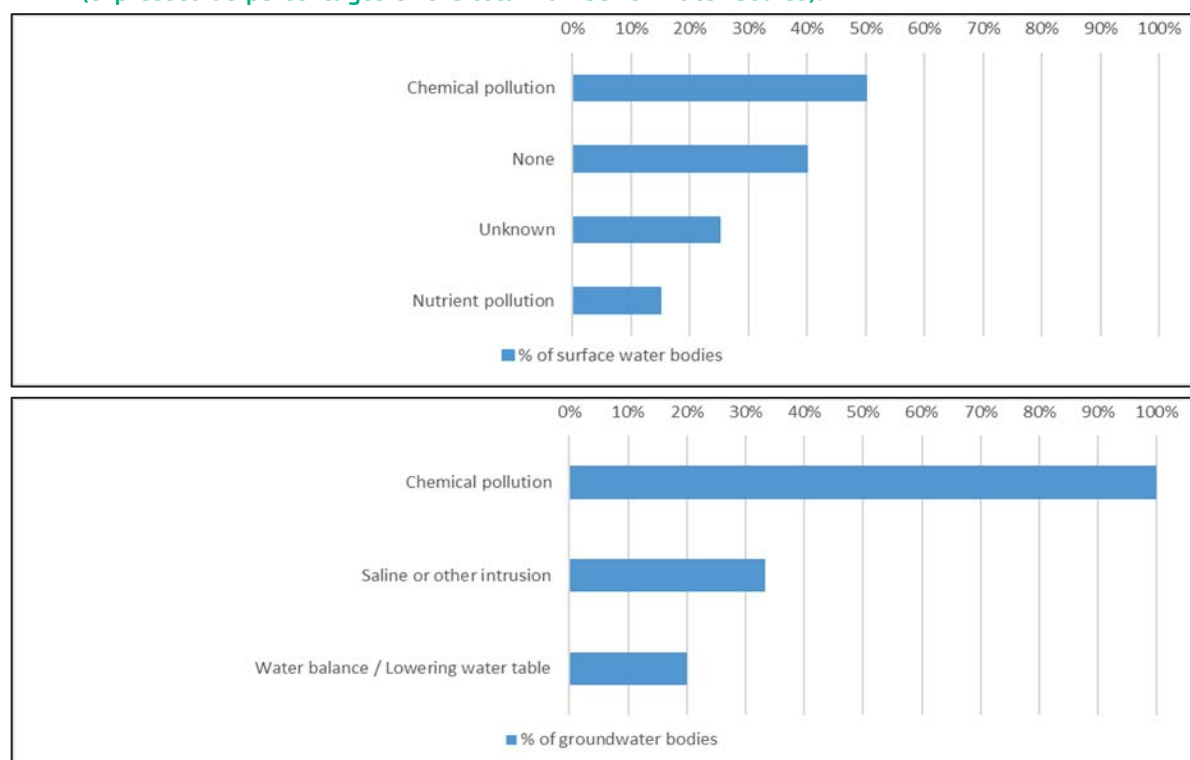
⁵ Based on Malta's electronic reporting in [WISE Freshwater](#).

Figure 1. The most significant pressures on surface water and groundwater bodies in Malta in the third RBMP (expressed as percentages of the total number of water bodies).



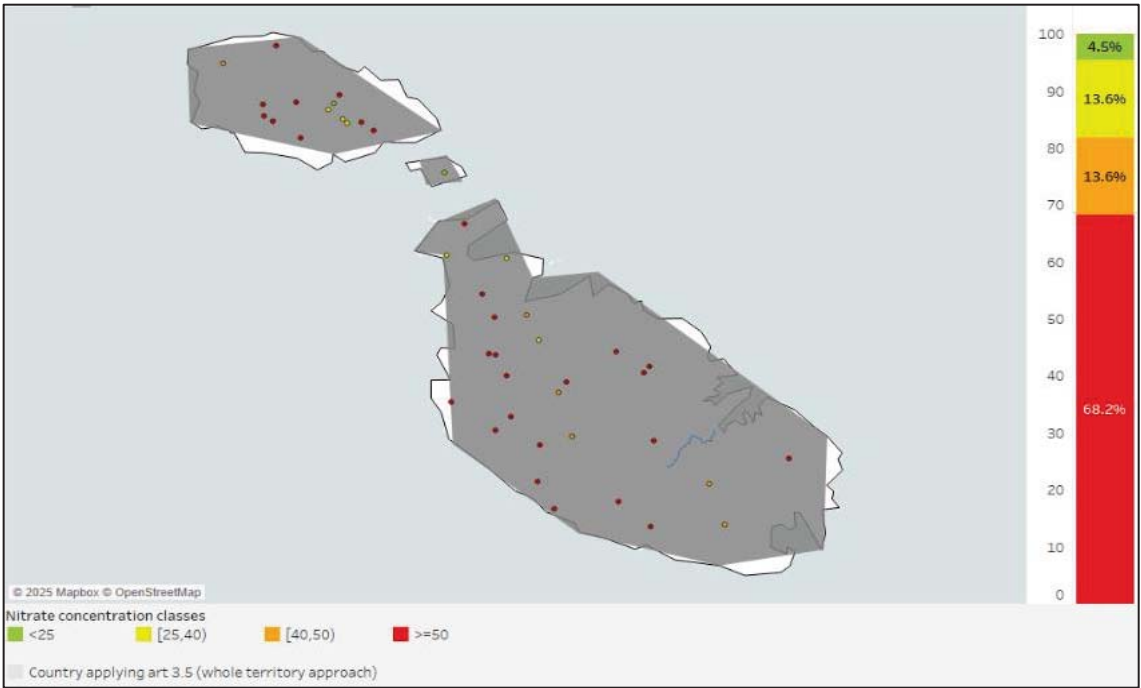
Source: WISE electronic reporting.

Figure 2. The most significant impacts on surface water and groundwater bodies in Malta in the third RBMP (expressed as percentages of the total number of water bodies).



Source: WISE electronic reporting.

Figure 3a. Map of average annual mean nitrate concentrations in groundwater and share of monitoring points by nitrate concentration class in the reporting period 2020-2023.



Source: Malta Country Report on the Implementation of the Nitrates Directive, July 2026⁶.

Figure 3b. Map of monitoring points where the trophic status is evaluated as “eutrophic” or “could become eutrophic”.

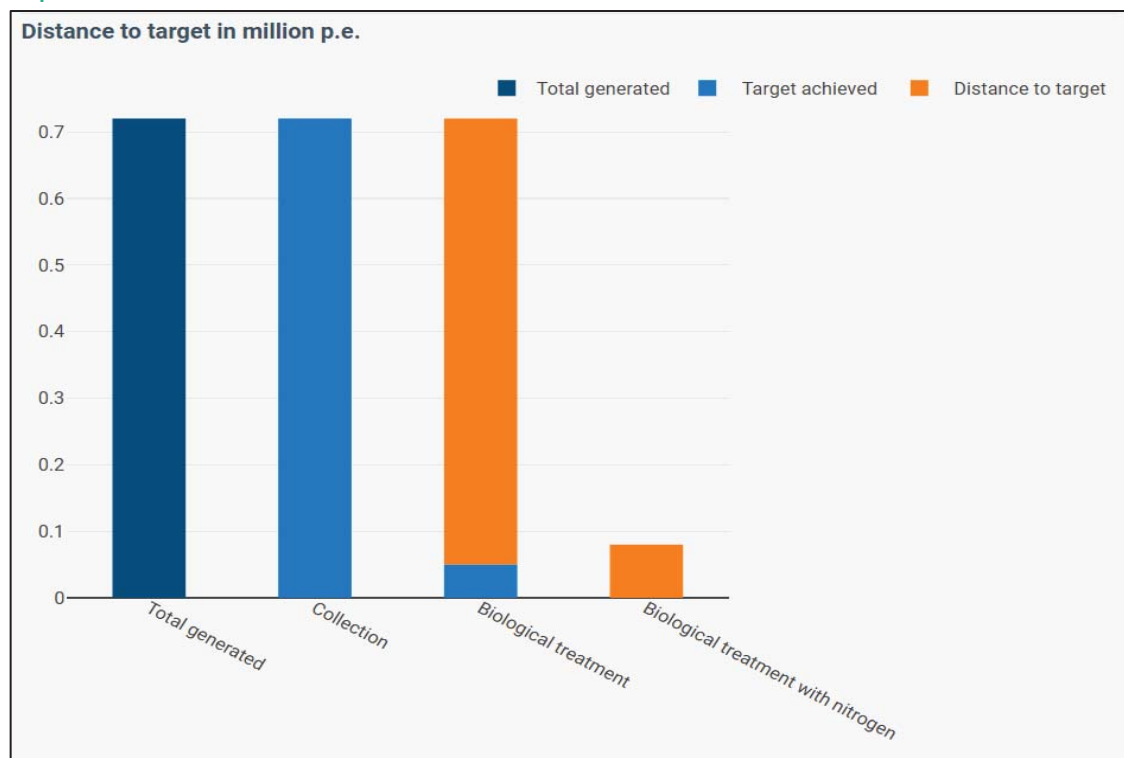


Source: Malta Country Report on the Implementation of the Nitrates Directive, July 2026⁷.

⁶ [Implementation of the Nitrates Directive: Country Reports - Environment](#)

⁷ [Implementation of the Nitrates Directive: Country Reports - Environment](#)

Figure 4. Amount of urban wastewater still to be collected or treated in accordance with UWWTD requirements in 2022.



Source: Malta's reporting on implementation of the UWWTD, 2022, and [Malta | WISE Freshwater](#).

3. Policy elements contributing to biodiversity and climate change adaptation



3.1 Ecological status or potential of surface water bodies

Monitoring

There are two main types of monitoring: i) operational monitoring, which determines the status of all water bodies at risk of failing to reach environmental objectives; and ii) surveillance monitoring, which provides an assessment of the overall surface water status within the river basin district and identifies impacts and long-term changes.

In Malta, the monitoring network has been updated and revised since the second RBMP. For each of the three watercourses, there is one surveillance monitoring station and three operational monitoring stations (upper, middle, lower). For the two small freshwater pools, there is one monitoring point in each, covering both types of monitoring. For the five transitional waters, there are two monitoring stations in each, covering both surveillance and operational monitoring. For coastal waters, there are 14 surveillance monitoring stations and 14 operational monitoring stations, all in separate locations.

The surveillance monitoring network for surface waters includes parameters indicative of most hydromorphological and all general physico-chemical quality elements relevant to ecological status classifications set out in Annex V to the WFD. However, Malta has not established type-specific conditions for physico-chemical or hydromorphological quality elements in any of the surface water categories.

It is unclear whether the tidal regime is monitored in transitional and coastal waters. RBSPs are also monitored in the four surface water categories. The operational monitoring network focuses on quality elements most sensitive to the relevant pressures affecting each water body.

The monitoring programme has been updated in the light of lessons learnt during implementation of the second RBMP, the data collected and the revised assessment of pressures and impacts on these water bodies. For rivers, lakes and transitional water bodies, the locations of almost all monitoring stations have been revised to reflect site-specific conditions and as far as possible, merge the locations for monitoring biological and supporting quality elements.

Some biological quality elements are not included in the monitoring schemes. This is particularly the case for phytoplankton in rivers, since this element is only recommended for large flowing rivers, which are not present in Malta. Equally, fish are not monitored in Malta's rivers and lakes because the rivers are intermittent and there is no indigenous fish fauna in Malta's pools.

Malta has not established type-specific conditions for physico-chemical quality elements or hydromorphological quality elements in any of the surface water categories.

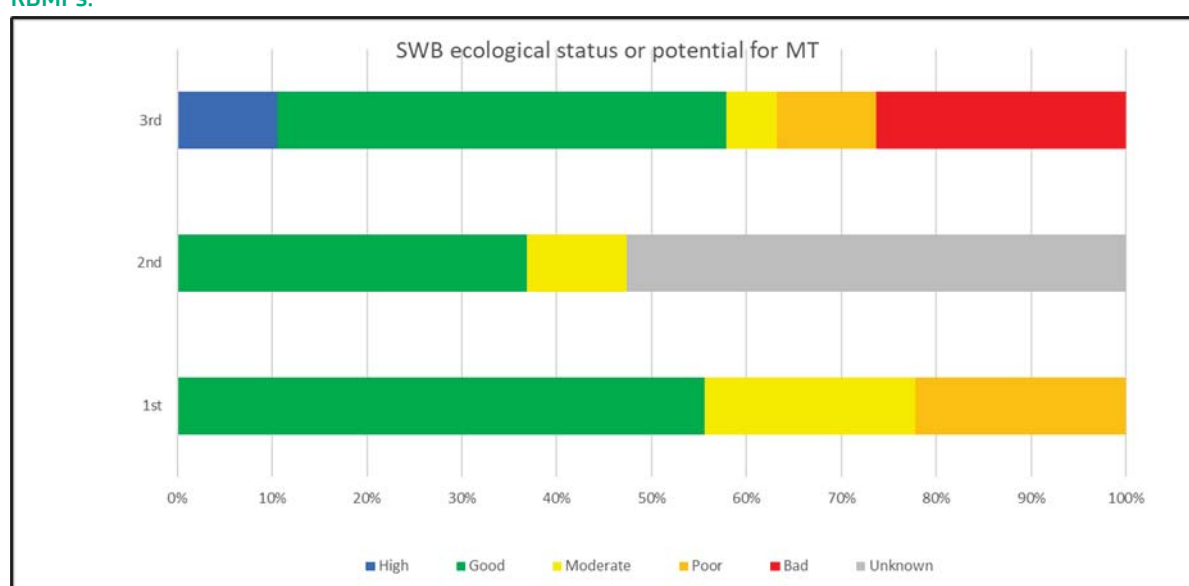
Status assessment

The ecological status assessment is based on at least one biological quality element for all surface water bodies. A positive change from the second to the third cycle is that the percentage of water bodies with unknown ecological status has decreased from 52.6% to 0%. Some of the water bodies with an unknown status in the last cycle have now been classified as having high or good ecological status.

The level of confidence in the ecological status assessment has changed since the second RBMP. In the third RBMP, all water bodies are classified with medium confidence. In the second RBMP, about half of the water bodies were classified as having an unknown status, while the other half was classified with high confidence.

The percentage of surface water bodies having a good or better ecological status or potential has increased from 36.8% in the second RBMP to 57.9% in the third RBMP (figure 5). This apparent change is likely due to the percentage of water bodies with an unknown status dropping from over 50% to 0% and the adjustments made to the monitoring system, rather than an actual improvement in status. By 2027, one additional water body is expected to achieve a good status, increasing the percentage of surface water bodies in a good or better from the current 57.9% to 63.2%.

Figure 5. Ecological status or potential of surface water bodies in Malta in the first, second and third RBMPs.



Source: WISE electronic reporting.



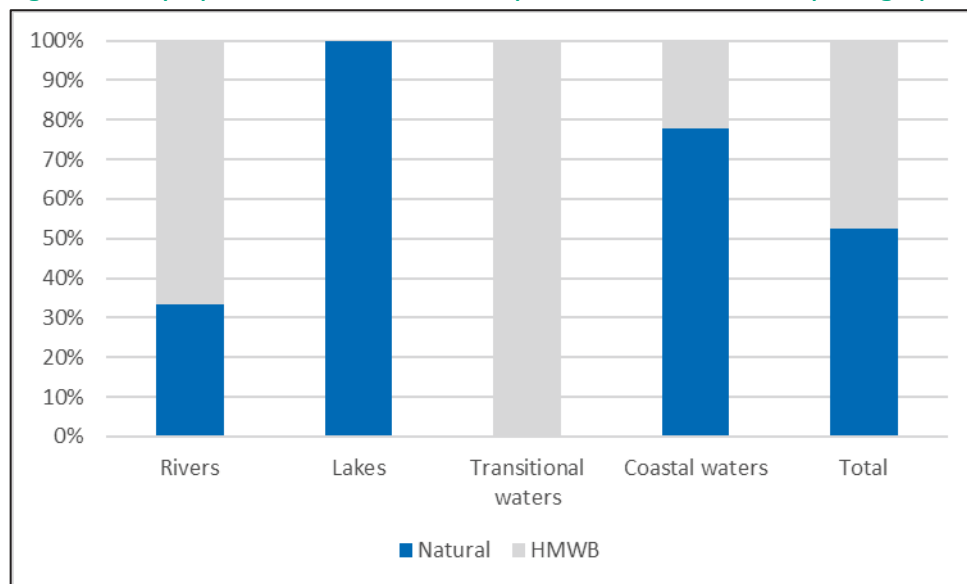
3.2 Hydromorphological changes and artificialisation (HMWBs and AWBs)

The level of human intervention in the water system is relatively high, with most of the surface water bodies having been subject to hydromorphological alterations. In watercourses, the main driver is agriculture, including the construction of retaining walls along the watercourses for terraced fields, as well as dams to retain rainwater. In transitional water bodies, alterations are mostly linked to historical uses, including urban development, transport, agriculture and aquaculture. Alterations to coastal waters are primarily driven by transport and navigation. The gap to achieving good hydromorphological status has not been reported for these pressures.

All transitional waters, 67% of the rivers, and all coastal waters are classified as heavily modified water bodies (HMWB) (Figure 6). However, this classification has changed considerably since the previous cycle. Although the total number of surface water bodies designated as HMWBs has not changed since the second RBMP, one lake and one river were designated as HMWBs in the second RMP, while in the third RBMP two out of three rivers are classified as HMWBs and both lakes are characterised as natural.

Water bodies are mostly designated as heavily modified due to urban development, followed by industry, tourism and recreation, and transport, and, to a lesser extent, fisheries and aquaculture, energy (other than hydropower) and irrigation. A national HMWB designation document accompanies the RBMP. The principles and steps of CIS Guidance Document No 4⁸ have been followed and the methodology for designating HMWBs explicitly refers to Article 4(3) of the WFD.

Figure 6. The proportion of natural or heavily modified water bodies by category and total.



Source: WISE electronic reporting.

According to the status assessment, four HMWBs are in good, one in moderate, 2 in poor, and 2 in poor ecological potential. The methodology for assessing good ecological potential (GEP) has been developed since the second RBMP. However, it is still considered to be preliminary in some respects. This is because the number of biological quality elements taken into consideration is limited and physico-chemical quality elements are excluded. The method is planned to be improved, and the current preliminary GEP assessment will be re-evaluated in the upcoming WFD implementation cycles.



3.3 Groundwater bodies - have they sufficient water – quantitative status

Monitoring

Malta has delineated 15 groundwater bodies (GWBs), with no changes to the boundaries or total area since the last two cycles. It is positive that quantitative monitoring has increased from 3 GWBs (20%) in the second RBMP to 7 (46.7%) in the third RBMP⁹, with the number of monitoring sites rising from 38 to 43. Monitoring 7 out of 15 GWBs covers 85.5% of the total GWB area. Four GWBs have consistently been identified as drinking water protected areas in both reports.

⁸ Common Implementation Strategy for the Water Framework Directive (2000/60/EC), Guidance Document No. 4. Identification and Designation of Heavily Modified and Artificial Water Bodies.

⁹ In the second RBMP e-reporting Malta reported 2 GWBs subject to quantitative monitoring. Subsequently, as part of the consultation of the EC Implementation report for the second RBMP (<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=SWD:2019:48:FIN&qid=1551205988853&from=EN>), Malta stated that 3 GWBs were subject to quantitative monitoring.

Status assessment

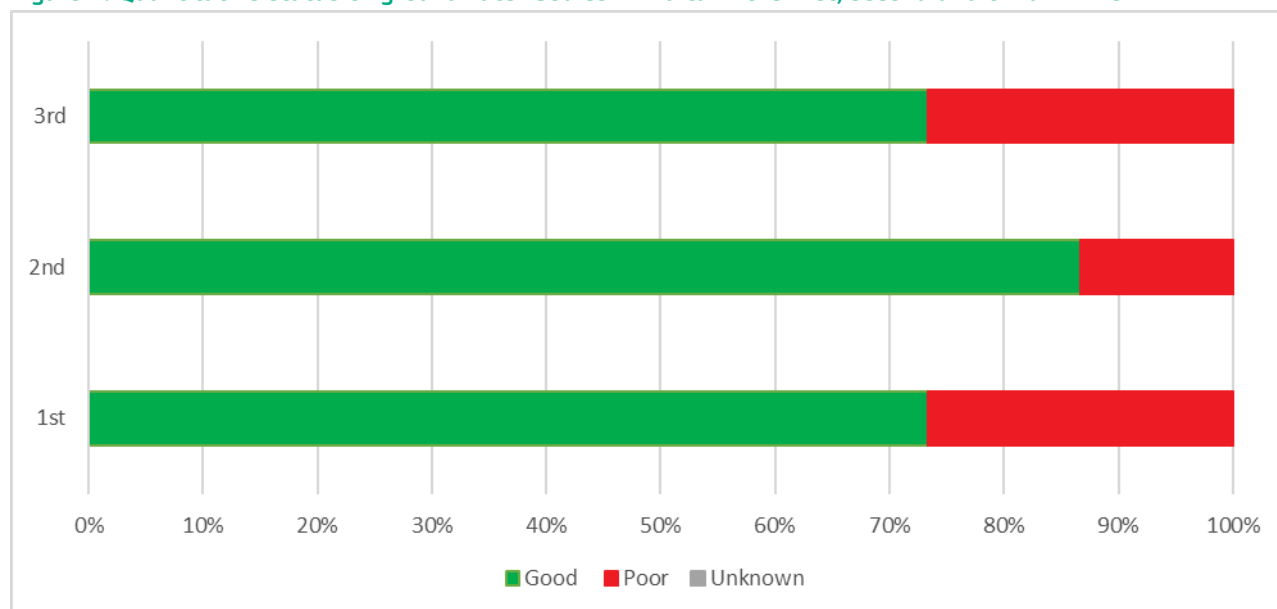
In 2021, 11 out of 15 GWBs (73.3% of total GWBs) were classified as having good quantitative status, while 4 GWBs (26.7%) remained in poor quantitative status (Figure 7). This represents an increase from 2 to 4 GWBs in poor quantitative status from the second to the third RBMP, indicating an overall deterioration. Given this observed negative trend, it is surprising that the RBMP expects all GWBs to be in a good status in 2027, even though 2 are 'at risk of failing'.

Of the monitored GW area (7 out of 15 GWBs, representing 85.5% of the total GW area), 95.9% is in a poor quantitative status, which indicates a systemic problem of overabstraction.

The classification of groundwater quantitative status in the third RBMP has been conducted with high confidence (100% of assessments), consistent with the approach taken in the second RBMP.

Malta does not consider saline intrusions in the groundwater quantitative status assessment in the third RBMP. There are no reports of GWBs failing to achieve good quantitative status because of saline intrusions caused by human-induced changes in flow direction. However, Malta has reported that 7 of 15 GWBs failed to achieve good chemical status for this same reason.

Figure 7. Quantitative status of groundwater bodies in Malta in the first, second and third RBMPs



Source: WISE electronic reporting.



3.4 Protected Areas (identification, monitoring, objectives and measures)

Malta has designated various types of protected areas:

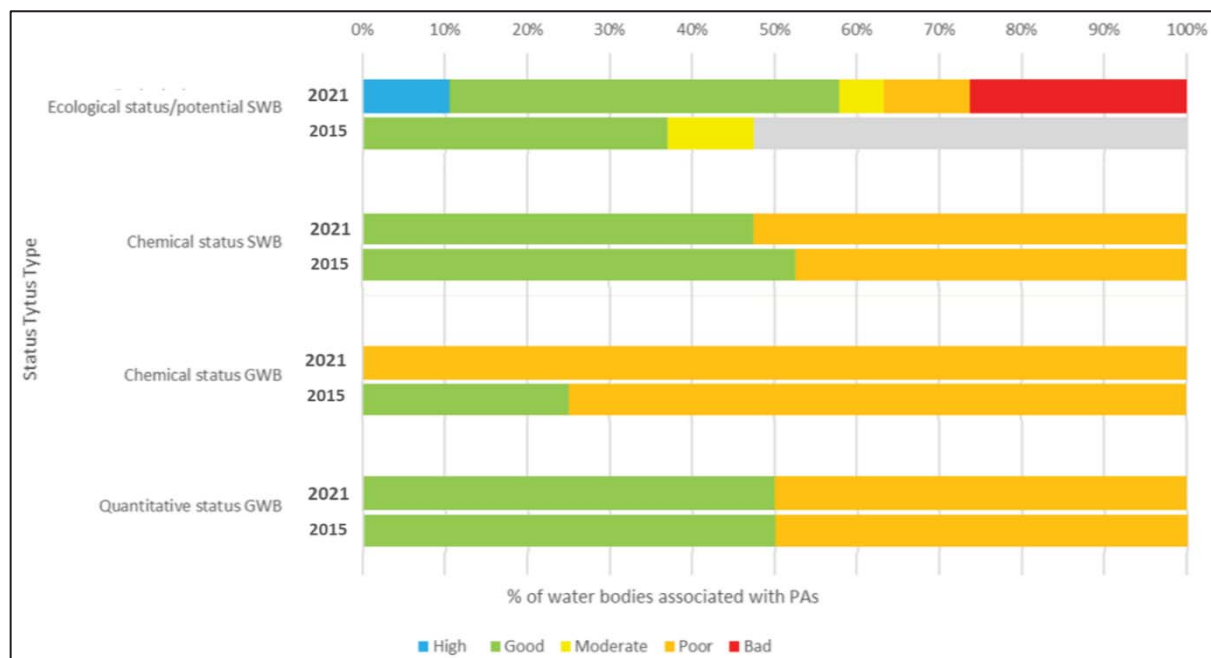
- areas designated for the abstraction of water intended for human consumption;
- nutrient-sensitive protected areas designated under the Urban Wastewater Treatment Directive (urban wastewater sensitive area);
- areas designated as bathing waters under the Bathing Waters Directive;
- areas designated for the protection of habitats or species under the Habitats Directive and the Birds Directive;
- nationally designated areas (Common Database on Designated Areas).

The whole island has been designated as a Nitrate Vulnerable Zone under the Nitrates Directive. No areas have been identified for the protection of economically significant aquatic species.

Figure 8 shows the progress in the status of water bodies associated with protected areas in the second and third RBMPs. This indicates a positive improvement in ecological status, but stagnation in quantitative status and deterioration in chemical status. However, due to the substantial changes in monitoring and assessment, comparability of data between the cycles might be low.

Monitoring sites have been established across surface and groundwater bodies associated with all protected areas. Malta has set additional objectives across protected areas and taken additional measures within these areas¹⁰. Protection measures have also been put in place for drinking water, specifically to guide specific land use activities in groundwater safeguard zones through planning and design guidance documents issued by the planning authority.

Figure 8. Progress in the status of water bodies associated with protected areas in the second RBMP (2016) and third RBMP (2022).



Source: WISE electronic reporting.

¹⁰ However, it is not clear whether such objectives have been set for nationally designated areas (Common Database on Designated Areas), which cover one lake.



3.5 What is being done to prevent/reduce hydromorphological pressures

In Malta, restoration and mitigation measures have been planned. The main drivers of hydromorphological pressures are agriculture, which affects rivers, historical water body use, which affects transitional water bodies, and transport routes, which affects coastal water bodies.

The following measures (grouped to their according Key Types of Measures (KTM)) have been identified to tackle these pressures:

- **Measures to improve the hydromorphological conditions of water bodies other than longitudinal continuity** (KTM 6): development of national guidance on WFD Article 4(7), a hydromorphological assessment targeting the increasing salinity of two transitional water bodies, and the restoration of one transitional water body.
- **Improvements in flow regime and/or establishment of ecological flows** (KTM 7): developing catchment management and restoration plans for the three rivers, supported by LIFE, without any explicit mention of ecological flows.
- **Research activities** (KTM 14): upgrading the inland run-off monitoring network to better assess the relationship between rainfall, run-off, recharge and evapotranspiration for six catchments, and setting up a separate monitoring network to enable the assessment of the relationship between rainfall characteristics and flood risk.
- **Natural water retention measures** (KTM 23): management and rehabilitation plans for separate catchments to increase rainwater harvesting and aquifer recharge and improve stormwater handling using sustainable urban drainage systems and nature-based solutions, co-financed by LIFE and aligned with the flood risk management plan. There is also a measure for financial support schemes to promote Green Urban Infrastructure, such as green roofs, green walls, and green open areas.
- **Restoration of water bodies**: measures under KTM 99 (other) to assess options and develop plans to restore a freshwater pool and a transitional water body respectively. The latter is supported by EU LIFE funds.

Furthermore, measures under 'Water efficiency, technical measures for irrigation, industry, energy and households' (KTM 8) would have an indirect impact (see Chapter 3.6).

There was no explicit mention of a systematic review of permits to set ecological flow requirements in the three intermittent rivers. However, securing sufficient flow of water and sediment is highly significant for the groundwater-dependent ecosystems in these catchments. In the second RBMP, an authorisation and/or permitting regime was reported to control physical modifications.

Some supplementary information has been received after the RBMP reporting, see footnote¹¹.

¹¹ Supplementary information: Malta is implementing interventions to reverse trends in the loss of biodiversity and associated degradation of ecosystem services according to already implemented national policies. Considering Malta's vision that by 2050 biodiversity and ecosystems are protected, valued and where possible restored, the 2021-2027 programme "Towards a smarter, well connected and resilient economy, a greener environment and an integrated society", Malta is investing in enhancing protection and preservation of nature, biodiversity and green infrastructure and reducing all forms of pollution. Malta benefits from an ERDF contribution of EUR 14.4 million to invest in actions to enhance, protect and preserve biodiversity such as the enhancement of biological habitat areas, ecosystem conservation and restoration projects to address biodiversity and ecosystem resilience.



3.6 What Malta is doing for abstractions and water scarcity

Diminishing precipitation is an acute, systemic problem in Malta, causing reduced natural recharge of groundwater bodies and an overall reduction in freshwater availability. Malta is one of Europe's most water-stressed countries, with the collective water demand for households, agriculture, industry, tourism, and energy putting very significant pressure on the water cycle, and the demand is expected to increase. Malta's Seasonal Water Exploitation Index+ (WEI+) was reported at 66.7% in the third quarter of 2023. Generally, Malta has the highest WEI+ level in the EU after Cyprus.

Malta already relies heavily on desalinating seawater and reusing water from treated wastewater to supplement groundwater and rainwater harvesting, while at the same time tackling groundwater saline intrusion and pollution.

In 2019, the main water users in Malta were agriculture (48.3%), public water supply (37.6%), and industry (14.1%). The total water demand has led to a systemic overabstraction of groundwater with 4 out of 15 groundwater bodies (GWBs) in poor quantitative status due to abstraction or alterations in groundwater levels.

The following measures (grouped to their according Key Types of Measures (KTM)) have been identified to tackle these pressures:

- **Water efficiency**, technical measures for irrigation, industry, energy and households (KTM 8): measures to reduce leakage in the municipal water network and reduce energy consumption, revision of the regulatory framework for rainwater harvesting in new developments, support for domestic rainwater harvesting, household water consumption audits to increase awareness (supported by EU LIFE funds), online water consumption information and alerts for consumers, and educational activities on water conservation. Measures for enterprises and the commercial sector include technical and financial support, efficient water use and greywater recycling, a support scheme for the uptake of efficient irrigation systems by the agricultural sector and the use of remote sensing of crop water demand.
- **Water pricing** policy measures for the implementation of the recovery of the costs of water services from agriculture (KTM 11): the development of a groundwater abstraction licensing framework to better regulate groundwater abstraction by users in the agricultural, commercial, and domestic sectors. Registering a borehole will no longer be sufficient. Users will need to hold a licence for a specific volume, digital metering will become mandatory, and an increasing block tariff will be introduced to discourage waste. The proposed regime would provide free quotas for farmers. Once a quota is exceeded, volumetric charges would apply depending on crops, farm size and livestock units¹².
- **Research**, improvement of knowledge base reducing uncertainty (KTM 14): research and innovation to address efficient water use, water use in agriculture and non-conventional water resources. There is also a measure to assess the feasibility of Managed Aquifer Recharge and develop guidelines for it.
- **Adaptation to climate change** (KTM 24): recommissioning and optimising groundwater abstraction to reduce saline intrusion, increasing the production capacity of municipal desalination plants to reduce groundwater abstraction while upgrading energy efficiency, and increasing the production capacity of treatment plants for reclaimed water and their distribution network. Other measures include information and training to promote reused water (supported by EU LIFE funds) and financial support for domestic greywater recycling.

¹² [Malta Today](#), 23 November 2023, 'New tariffs and quotas for groundwater extraction'.

- **Other** (KTM 99): support for restoration of communal rainwater harvesting reservoirs.

The third RBMP does not provide estimates of the extent of illegal abstraction in Malta or elaborate on the need to control it.

Malta has not adopted a specific plan for water scarcity and droughts nor a separate drought management plan, but the third RBMP states that it may be considered a drought management plan in itself¹³.

No surface water bodies have failed to achieve good ecological status due to abstraction. As described in Chapter 3.5, Malta has not set out or implemented ecological flows (e-flows) for surface water bodies, although doing so could have positive effects on groundwater recharge and groundwater-dependent ecosystems in the relevant catchments and corresponding aquifers.

Regarding controls on groundwater abstraction (WFD Article 11(3)(e)), Malta has a registration, metering and permitting regime in place. However, small abstractions are exempt from permits under certain thresholds¹⁴, for example for domestic use up to 1 m³/day. Permits are issued based on technical documentation, but their duration is not generally prescribed by law but is instead determined on a case-by-case basis. Permits can be revised or refused to meet environmental objectives.

There is no registration or permitting regime to control abstraction from surface water and impoundments. National authorities may conduct relevant sample checks after authorisation or targeted checks following complaints to prevent cases of unauthorised abstraction or violation of permit conditions.

Some supplementary information has been received after the RBMP reporting, see footnote¹⁵.

¹³ Malta subsequently noted that the third RBMP recognises that Malta's hydrological conditions are distinct from most other EU Member States, with the country facing a state of permanent water scarcity rather than episodic droughts. This is clearly outlined in Section 1.2 (pp. 1-2), where the RBMP states that: The third RBMP can therefore be considered as a Drought Management Plan in itself, given that it addresses a water management context which is significantly different than that experienced in mainland Europe. Malta's context of permanent scarcity of natural freshwater resources goes beyond the impact of temporary droughts and results in the permanent scarcity of natural freshwater resources. The RBMP itself functions as an integrated framework addressing both water scarcity and drought-related risks, adapted to the permanent arid conditions of the Maltese islands.

¹⁴ Exempted water abstractions include:

- (a) abstraction points without a pump or other mechanical device installed or used to abstract groundwater;
- (b) abstraction points proved by the user to be a cultural property under the Cultural Heritage Act;
- (c) abstraction points declared by the user as sources solely for domestic purposes by the user's household and where the abstraction from this source does not exceed 1 m³/day.

¹⁵ Supplementary information: To combat water scarcity, under the 2021-2027 programme 'Towards a smarter, well connected and resilient economy, a greener environment and an integrated society', Malta is investing, with the support of EUR 52.7 million from the Cohesion Fund, in the modernisation of the potable water supply networks and plants, improving leakage control and promoting water savings actions. These actions are central for climate change mitigation and will target the improvement of public infrastructure for sustainable water management in order to build on the investments supported under the 2014-2020 programming period such as further investment in the upgrading of water distribution networks. These actions will aim to reduce frictional losses while maintaining efforts to reduce leakages and enhance water security in line with the draft National Investment Plan 2022-2030. Investment under this Priority may also target the rehabilitation of reservoirs and reverse osmosis upgrades.



3.7 Adaptation to climate change

Given the close relationship between water management in general and flood management, and the effect of climate change on both, aspects relating to droughts and floods are addressed together in this section.

Malta's third RBMP highlights climate change as a key factor influencing national water demand. The plan notes that reduced rainfall and more intense weather events will lower groundwater recharge, while rising temperatures will increase water demand and evaporation, exacerbating existing water scarcity. However, the third RBMP lacks a detailed assessment of how climate change will affect specific pressures. While Malta adopted a Climate Change Adaptation Strategy in 2012, this is not referenced in the third RBMP. The RBMP also does not explicitly consider climate change in its assessment of the ecological status of surface water bodies.

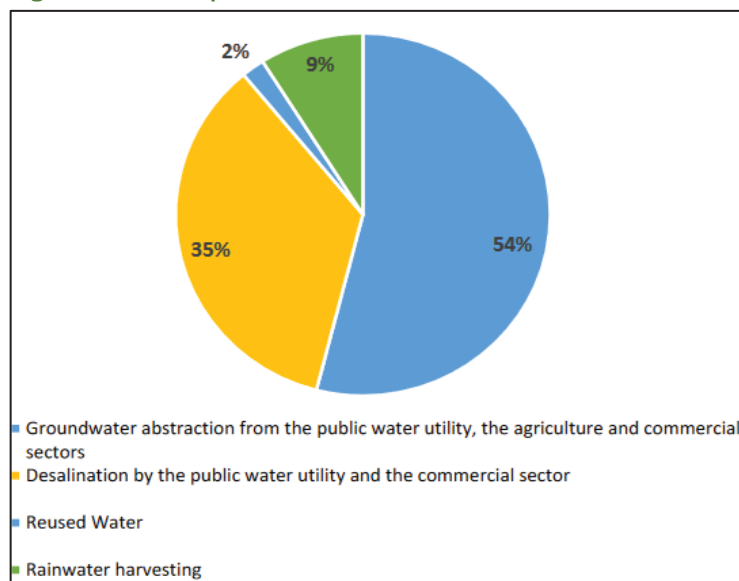
The third RBMP acknowledges that climate change will worsen aridity, water scarcity and drought conditions. These changes will reduce groundwater recharge and increase drought frequency and severity. The plan therefore covers water supply sources, including desalination, reclaimed water and rainwater harvesting. However, regrettably, there are no quantitative projections for future climate scenarios, water availability or infrastructure capacity to cope with water scarcity.

Water scarcity

Malta's semi-arid climate, characterised by low rainfall and high evapotranspiration, results in permanent water scarcity. The third RBMP addresses this through supply- and demand-side measures, such as optimising groundwater use, expanding desalination and implementing a drought monitoring framework.

The national freshwater resource base of the Maltese islands is insufficient to meet demand. Malta closes the gap between natural freshwater resources and water demand by increasing groundwater extraction and increasing supply through the desalination of seawater (35%), rainwater harvesting (9%) and reused ('reclaimed') water (2%) (Figure 9). There are three main desalination plants in Malta: Pembroke, Ċirkewwa, and Għar Lapsi.

Figure 9: Water production resource base in Malta in 2022.



Source: Third RBMP Malta.

Malta's approach to closing the gap between water supply and demand relies heavily on desalination, which meets a third of total water demand (35%), while only 2% is currently met by reusing wastewater. This disparity suggests that the potential for wastewater reuse remains largely untapped. In the absence of long-term water scenarios and investment plans/forecasts (see Section 5.2), the reasons for the current water supply mix and Malta's vision over the longer term are unclear.

To address this apparent imbalance, Malta's new programme of measures (PoM) highlights the importance of reclaimed wastewater as a resource. The PoM includes a proposal to promote the use of greywater reuse technologies *in households* and the *commercial* sector (KTM8 – measures 026 and 029). However, Malta's PoM does not address water reuse *in agriculture*, even though this sector accounts for most groundwater use in Malta and is therefore a major contributor to groundwater overexploitation and resulting saline intrusions. According to the third RBMP, a dedicated distribution network is being developed in agricultural areas to enable the effective distribution of reclaimed water. However, neither the RBMP nor the PoM provides any specifics on the intended water volumes, timeline or funding. While the cost-effectiveness analysis presented reports a small relative advantage for desalination, it is unclear whether the analysis has also taken into account strategic factors such as the carbon footprint, the diversification of water supply and the capital-cost synergies that could arise from the mandatory upgrading of existing urban wastewater plants and the installation of new capacity in smaller agglomerations as envisaged under the revised Urban Wastewater Treatment Directive.

Given Malta's semi-arid climate, the country views the third RBMP as a drought management plan, as it addresses water management on a continuous basis rather than only during temporary drought conditions. All measures within the PoM, including the Drought Monitoring Framework, support adaptation to drought conditions in some form.

That said, a specific benefit of a stand-alone Drought Management Plan would be the inclusion of a process for analysing the effectiveness of drought mitigation measures after a drought has occurred. In a semi-arid country, where drought is constant, this feedback loop could consist in permanently monitoring the impact of drought adaptation measures. Such monitoring is particularly important in view of the expected consequences of climate change, including lower overall rainfall and rising temperatures, which will increase water demand and evaporation and thereby exacerbate existing water scarcity. Nevertheless, Malta's third RBMP and PoM include many measures that would also normally form part of a Drought Management Plan.

As regards floods, the Floods Directive requires the impact of climate change on the occurrence of floods to be considered when preparing the flood hazard and risk maps (FHRMs) and Flood Risk Management Plans (FRMPs). While climate change was not included in Malta's first FHRMs, the second FHRMs incorporated a single climate change scenario, based on a 50% increase in intense rainfall events, into the modelling of each of the three flood probability scenarios. The resulting flood hazard and risk maps already consider this scenario of more extreme rainfall events.

In the second FRMPs, climate change is mentioned in the section summarising the methodology and results of the FHRM (although the plans do not explain how climate change may affect flooding in the future). The impacts of climate change on flood risk were considered in Malta during the preparation of the second PFRAs. Although no specific climate change scenarios were developed for Malta, a multiplying factor was applied to historical trends in each catchment to account for the expected increase in extreme rainfall events. Furthermore, climate change readiness was assessed for all measures as part of the multi-criteria analysis carried out to prioritise measures. The measures

themselves covered several Sustainable Drainage Systems (SuDS) and green infrastructure activities and schemes.

Some supplementary information has been received after the RBMP reporting, see footnote¹⁶.

¹⁶ Supplementary information: Malta has published a [€310M National Investment Plan](#) for Water and Wastewater towards 2033.



4. Policy elements contributing to zero pollution

4.1 Surface Water: what is their chemical status

Monitoring

Malta operates an extensive monitoring programme for the chemical status of its surface waters. In both the second and third RBMPs, all of Malta's rivers, lakes and transitional water bodies and 78% of its coastal water bodies were monitored (with 29 priority substances included). Due to this extensive monitoring coverage, 95% of the water bodies received a status classification, with 5% remaining with an unknown status. However, 16 priority substances have not been included in the monitoring network, mainly POPs and pesticides.

The third RBMP presents surveillance monitoring for all three matrices: water, biota, and sediment.

The third RBMP states that monitoring occurs at the frequency set by the WFD: monthly in water and annually in sediment and biota.

There are 34 substances identified as being relevant at RBD-scale, but no emission inventories have been completed for any of them.

Status assessment – Changes in the chemical status of surface water bodies since the second RBMP

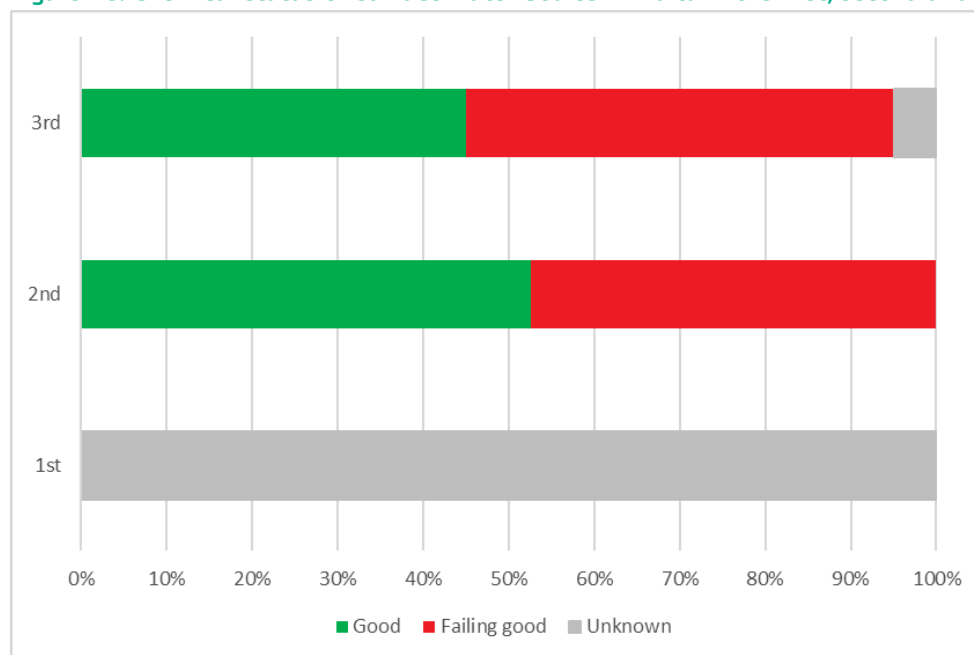
A large proportion (95%) of all surface water bodies have been assessed for chemical status, which is slightly lower than in the second RBMP (Figure 10). Of the water bodies assessed, 9 (45%) are in a good chemical status, while 10 (50%) are not¹⁷. The status of the remaining water body (5%) is unknown. Overall, there appears to have been a deterioration in chemical status between the second and third cycles. However, this seems to be due to changes in methodology, assessment or monitoring rather than actual environmental deterioration.

A total of 10 rivers, transitional water bodies and lakes changed from good to poor chemical status, while all coastal water bodies moved from poor to good chemical status between the second and the third cycles¹⁸. No further change in chemical status is expected in 2027.

¹⁷ Malta subsequently clarified that the water body of unknown status is a territorial water body that was included for the first time in the third RBMP and has therefore not yet been assigned a chemical status.

¹⁸ The Maltese authorities subsequently submitted communications explaining that the 2013 EQSD introduced revised EQS thresholds for certain substances in water and a new standard for mercury in biota, which affected their assessment. It further clarified that the failure of coastal waters to achieve good chemical status in the second RBMP was due to one substance: mercury.

Figure 10. Chemical status of surface water bodies in Malta in the first, second and third RBMPs

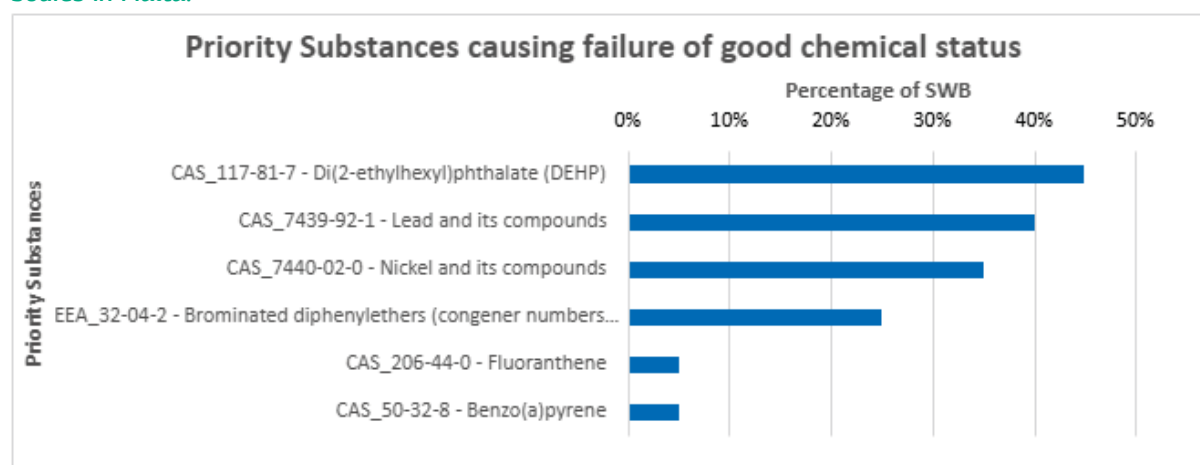


Source: WISE electronic reporting.

The main reason for failing to achieve good chemical status is the presence of four specific priority substances (Figure 11): DEHP, lead and its compounds, nickel and its compounds, and polybrominated diphenyl ethers (PBDEs). PBDEs are classified as ubiquitous, persistent, bioaccumulative and toxic (uPBT) substances. Sources listed include urban stormwater run-off, legacy landfill leaching, atmospheric deposition and point sources.

In the 2nd RBMP, in addition to mercury, other metals (cadmium, lead, nickel), a biocide (cybutryne used as anti-fouling agent, banned since 2016¹⁹) and a pesticide (banned since 2007²⁰) were causing failure. Given that several of the pollutants are persistent, it seems odd that they do not appear anymore in this cycle as a frequent cause for failure to achieve the objectives.

Figure 11. The top 10 priority substances causing failure to achieve good chemical status in surface water bodies in Malta.



Source: WISE electronic reporting.

¹⁹ [Implementing decision - 2016/107 - EN - EUR-Lex](#)

²⁰ [EU Pesticides Database - Active substances - Active substance details](#)



4.2 Groundwater Bodies: what is their chemical status

Monitoring

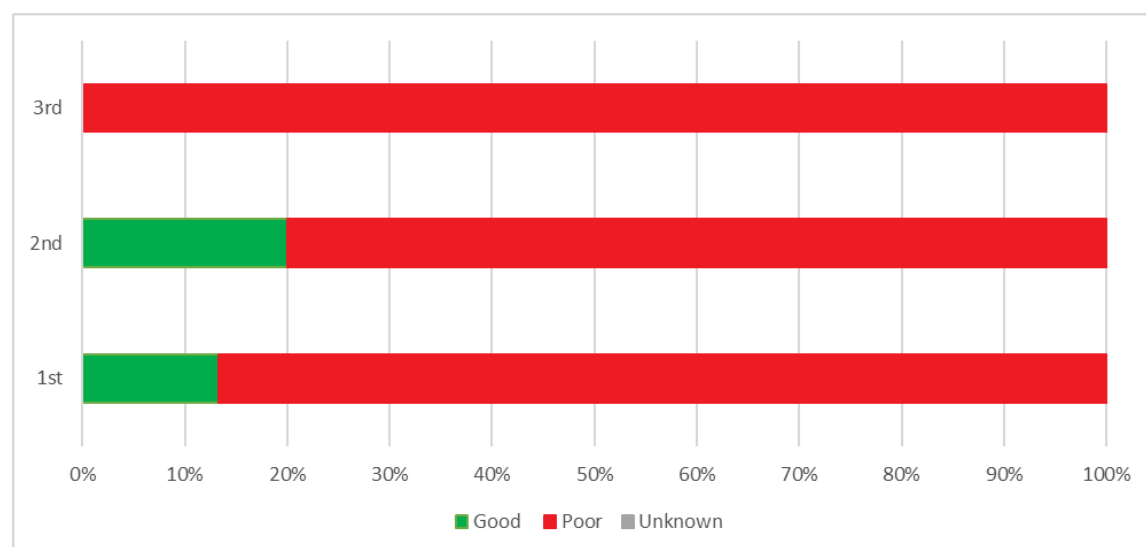
All GWBs are fully covered by chemical monitoring, with each of the 42 monitoring sites used for both surveillance and operational purposes. These figures are consistent with those reported in the previous reporting cycle. Currently, 100% of the total GWB area is in poor chemical status.

Nitrate monitoring is coordinated with the WFD monitoring programme and is conducted in all 15 groundwater bodies.

Status assessment

By 2021, all 15 groundwater bodies (GWBs) were in poor chemical status, compared with 12 out of 15 in 2015 (Figure 12). This indicates a deterioration in chemical status, which is expected to continue: by 2027, 13 GWBs are expected to remain in less than good chemical status, and all 15 are at risk of failing to achieve good status. All chemical status assessments in both the second and third RBMPs were performed with high confidence.

Figure 12. Chemical status of groundwater bodies in Malta in the first, second and third RBMPs



Source: Third WISE electronic reporting

The main cause of failure in all GWBs is pollution, with 5 GWBs also affected by saline or other intrusions linked to human-induced changes in water flow. The top pollutants causing failure are nitrate, chloride, sodium, saline intrusion and sulphate, with some GWBs affected by more than one pollutant. Pollutants showing sustained upward trends include sodium, saline intrusion, chloride, sulphate and boron. The sources identified include agriculture and livestock farming, urban and transport stormwater run-off, commercial and industrial facilities, and legacy landfill sites.



4.3 What Malta is doing to combat pollution from agriculture

The following measures (grouped to their according Key Types of Measures (KTM)) have been identified to reduce nutrient and pesticide pollution from agriculture in the updated PoM:

- **Nutrients (KTM2):** The review and revision of Malta's nitrates action programme, to address the shortfall in achieving good status for the three inland surface water bodies. In parallel, the measure will contribute to achieving the objectives for relevant Natura 2000 sites. Malta also has a 'Code of Good Agricultural Practice' to help meet its obligations under the Nitrates Directive.
- **Pesticides (KTM3):** Awareness-raising, training and guidance on the sustainable use of pesticides, developed under Malta's national action plan for the sustainable use of pesticides, will help prevent contamination of surface water and thereby reduce pollution. This measure reflects the eco-schemes adopted in line with Malta's common agricultural policy strategic plan, which provide incentives for farmers to adopt integrated pest management. Such eco-schemes can also promote the use of sustainable or lower-risk pesticides.

There is no quantification of the reductions in pesticide and nutrient loads necessary to achieve good status. This information is needed to ensure the required measures are properly tailored.

The third RBMP states that funding for measures to reduce agricultural pollution will come from the Rural Development Programme (CAP strategic plan), the EU LIFE Programme for Malta and funding for integrated pesticide management. The third RBMP does not provide a breakdown of funding from these sources.

Without information on the required load reductions, the scale at which the measures are planned to be implemented, their estimated effect and associated funding, it is not possible to assess whether the measures are ambitious enough to close the implementation gap and achieve good status.

Some supplementary information has been received after the RBMP reporting, see footnote²¹



4.4 What Malta is doing to combat pollution from other sectors

The third RBMP includes measures to tackle pollution from non-agricultural sources, such as urban wastewater treatment plants, sewage discharge, industrial pollution and run-off from urban areas.

According to Malta's 2022 reporting under the Urban Waste Water Treatment Directive (UWWTD), only 7% of the urban wastewater in Malta is treated in accordance with the requirements. This resulted in a judgment by the European Court of Justice in October 2024 (case C-304/23).

The following measures (grouped to their according Key Types of Measures (KTM)) have been identified in the updated PoM:

²¹ Supplementary information: Malta's [CAP Strategic Plan](#) aims to increase the share of organic farming from the current 66 hectares to 272 hectares by 2027. Meanwhile, it allocates EUR 10.7 million to encourage farmers to adopt a more sustainable approach to pest controls, among other actions, with commitments that are planned to cover almost 10% of utilised agricultural areas. Source: [Mapping and analysis of CAP strategic plans - Publications Office of the EU](#).

- **Urban wastewater (KTM21):** Malta's Water Services Corporation will continue to invest significantly in monitoring and inspecting the sewerage network, including in measures to mitigate sewage overflows from key pumping stations into the surrounding environment. This measure will contribute to maintaining or improving nutrient conditions in inland surface water bodies and coastal waters and help to close the gap to achieving good status for inland and transitional water bodies, while also supporting the maintenance of good status in coastal waters. Some supplementary information has been received after the RBMP reporting, see footnote²².
- **Industry (KTM15):** Malta will continue to refine the regulatory framework for industrial operational practices connected to the Environmental Permitting System, addressing both point and diffuse source discharges to surface and ground waters. This includes preventive measures in permits, such as the setting of Emission Limit Values, and the control of substances. The measure also provides for the creation of an effective feedback mechanism to ensure compliance and risk mitigation, under which data from research and monitoring processes will inform necessary updates to environmental permits. This measure is intended to ensure that permits contribute adequately to achieving quality objectives for coastal water bodies through targeted control of chemical contaminants.

Without information on the assessment of the actual gap to achieving good status, the scale at which the measures are planned to be implemented and their estimated effects, it is not possible to assess whether the measures are ambitious enough to enable good status to be reached.



4.5 What Malta is doing to combat significant pressures – overall assessment of the Programmes of Measures

Malta's updated Programme of Measures (PoM) contains 56 measures, comprising 16 basic measures and 40 supplementary measures. The document explicitly states that the third PoM was developed to address the 'gaps in the achievement of good ecological and chemical status for surface water bodies, on the basis of the updated assessment of status and pressures'.

However, the document lacks information on the assessment of the actual gap preventing the achievement of good status and the planned scale of implementation or the estimated effects of the measures. Without this information, it is not possible to assess whether the measures are ambitious enough to achieve good status.

Although several measures have been linked to significant pressures and the relevant KTMs to tackle these pressures, most measures are described as 'contributing towards addressing the gap' instead of aiming to close the gap by the 2027 deadline.

²² Supplementary information: Malta plans to increase the capacity of its wastewater treatment plants, through efforts supported by EU funds. For the 2021-2027 programming period, under the programme 'Towards a smarter, well connected and resilient economy, a greener environment and an integrated society', Malta is receiving a contribution from ERDF funds of EUR 33 million to target the upgrade of the wastewater network and treatment plants, the capacity for regulating discharges to the wastewater network and catering for increased capacity to progressively optimise the management of wastewater enabling the further extension of Malta's water-reuse programme. The extension of the sewer network, including its rehabilitation to reduce sea-water infiltration, discharge of contaminants and outflowing leakages, may also be considered.

To prioritise measures, Malta has applied a semi-quantitative evaluation framework to score and rank the proposed management measures based on an assessment of their broad impacts. Key factors include whether the measure contributes to addressing key water management issues, its financial cost-effectiveness, its contribution to resource generation and environmental benefits, its contribution to addressing climate change impacts, and the likelihood that it will produce the expected results.

For surface waters, this resulted in priority being given to the implementation of measures associated with a high level of effectiveness in addressing relevant pressures and achieving good surface water status.

For groundwater, measures to increase water supply seem to rank higher than measures to manage water demand. This is based on the presumption that the 'low-hanging fruit' in demand management has already been reaped, while improved operational efficiency and lower production costs improve the ranking of measures to increase water supply. This approach is contrary to the water-efficiency-first principle, which states that, in descending order of priority, consumption should be reduced first, followed by measures to increase efficiency, the reuse of wastewater and, finally, the expansion of water supply.

Additionally, measures addressing nitrate contamination of groundwater and seawater intrusion are also given priority in this process.

The cost of the measures included in the RBMP is around EUR390.38 million. Of this, EUR 339.88 million comes from national funds, while the remaining EUR50.5 million comes from EU funding. Without information on the assessment of the actual gap to achieving good status, and the planned scale of implementation, it is impossible to assess whether this financing will be sufficient to close the gap by the 2027 deadline.

When designing and implementing research-related measures, Malta should make better and more systematic use of results from EU-funded research and innovation projects. This research can support better action on water management including future water demand as well as climate change impacts, and pollution from substances such as pesticides, pharmaceuticals, PFAS and microplastics.

5. Exemptions and economics



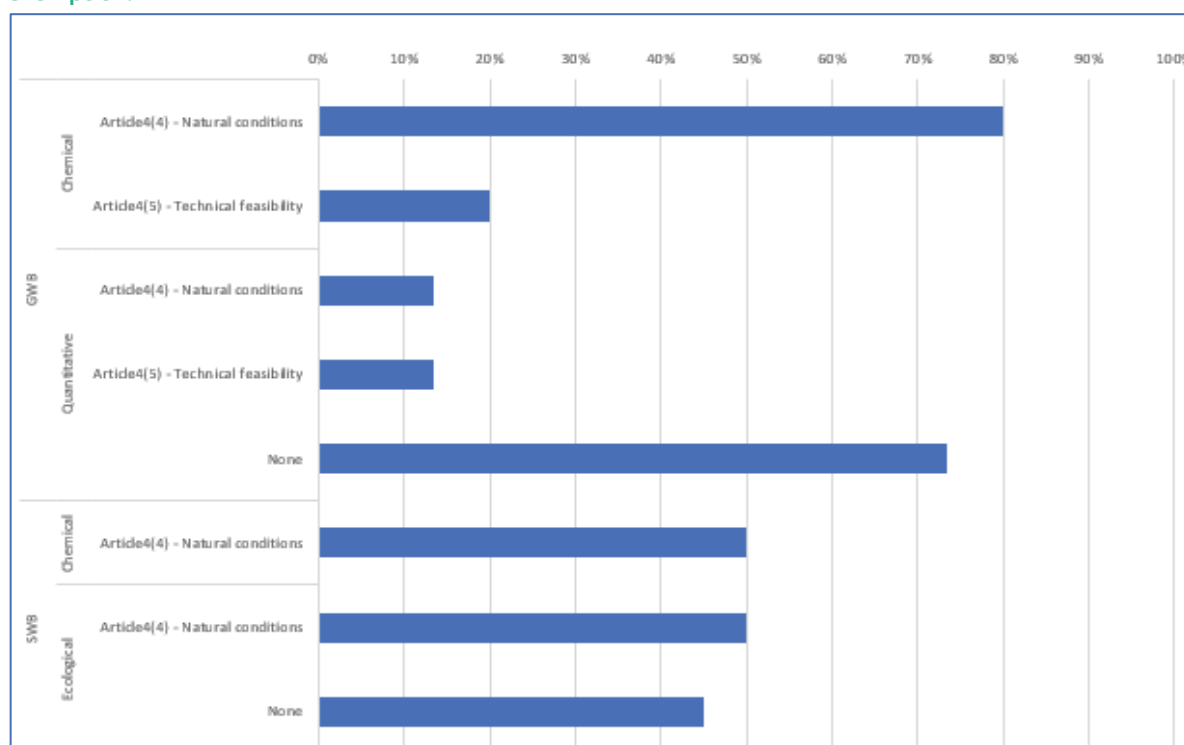
5.1 To what extent are exemptions applied in Malta?

According to the WFD, where the objective of good status has not yet been achieved, exemptions can be applied in accordance with Article 4, paragraphs 4, 5, 6 and 7. These should be used only where necessary and must be properly justified.

Malta still has progress to make in achieving the objectives under the WFD and has consequently reported a significant percentage of exemptions in the third RBMP. Exemptions in Malta have been applied under Article 4(4) and Article 4(5) as illustrated in 13²³.

Information on exemptions is provided at the level of individual water bodies, together with the grounds on which they are applied (e.g. natural conditions, technical infeasibility and disproportionate costs).

Figure13. The use of exemptions under Art. 4(4) and 4(5) WFD in surface water bodies (SWBs) and groundwater bodies (GWBs) in Malta. The figure shows the proportion of water bodies for each type of exemption.



Source: WISE electronic reporting.

A total of 10 surface water bodies and 13 groundwater bodies have been exempted under Article 4(4) of the WFD, as follows:

- 10 surface water bodies (50% out of a total of 20) for ecological status / potential;
- 10 surface water bodies (50% out of a total of 20) for chemical status;
- 2 groundwater bodies (13.3% out of a total of 15) for quantitative status;
- 12 groundwater bodies (80% out of a total of 15) for chemical status.

²³ Malta clarified that there was an error in the electronic reporting, resulting in slight differences from the figures reported in the third RBMP.

In Malta, Article 4(4) exemptions have been justified exclusively on the grounds of natural conditions. No exemptions under Article 4(4) have been justified on the grounds of technical feasibility or disproportionate costs.

In total, 3 groundwater bodies have been exempted under Article 4(5) of the WFD, as follows:

- 2 groundwater bodies (13.3% out of a total of 15) for quantitative status, and
- 3 groundwater bodies (20% out of a total of 15) for chemical status.

Article 4(5) exemptions have been justified only on the grounds of technical infeasibility, and none on the grounds of disproportionate costs.

No exemptions have been applied under Article 4(6) of the WFD.

No exemptions have been applied under Article 4(7) of the WFD. The third RBMP sets out the approach to assessing and authorising all new proposed developments, and it reports that several development proposals were subject to Article 4(7) screening. The screening indicated that no deterioration in water quality was expected, thereby eliminating the need for exemptions under Article 4(7)²⁴. The third RBMP includes a measure to develop a national guidance document on the application of Article 4(7).

No exemptions under Article 6(3) of the Groundwater Directive (GWD) have been reported.



5.2 Use of economic analysis and water pricing – cost recovery

Neither Malta's RBMP nor the background documents provide a summary of the economic analysis or a cost recovery assessment. However, relevant data have been submitted in the e-reporting. The RBMP does not include the relevant information available from the water regulator and agency to provide a comprehensive account of the approach used.

The e-reporting explicitly identifies only the provision of drinking water as a water service, i.e. without distinguishing between the individual services involved (i.e. the abstraction of surface and/or groundwater and its subsequent treatment and distribution). It does not mention other water services, such as wastewater collection and treatment, or distinguish between individual components²⁵.

Although the RBMPs and PoMs strongly emphasise the need to combine water supply and demand measures to ensure sufficient water availability, the third RBMP does not report projections of water demand and supply for future years, as required by Annex III to the WFD. Consequently, it remains unclear how the long-term climate scenario assessments have been taken into consideration and to what extent the RBMP has a strategic orientation.

²⁴ The types of development proposals screened for each coastal water body are listed in the third RBMP (see Table 52) (e.g. piers, breakwaters, marina). More details on the 'applicability assessment' are provided in the technical document entitled 'Surface Waters: Environmental Objectives and Exemptions'.

²⁵ Subsequently, Malta indicated that the operations of the public water utility, WSC (the Water Services Corporation), should be understood as comprising water services, i.e. the production, distribution, collection, treatment and discharge of water. Malta further stated that the current role of WSC goes beyond the definition of water services in Article 2 of the WFD because its operations include the supply of 'new water' supply in its operations. In Malta, 'new water' refers to treated and recycled wastewater used primarily for agricultural irrigation.

The PoM does not provide a comprehensive estimate of the costs of the planned measures. It is unclear how the cost-effectiveness assessment, described as including both quantitative and qualitative components, informed the selection of measures.

The significant gaps in the e-reporting on the economic analysis, particularly with regard to long-term investment needs and cost-effectiveness, make investment planning and related financing and cost recovery choices unclear. This is important because Malta's investments in expanding and upgrading capacity in the water sector have received substantial financial support from EU funds. National and EU funding for the measures planned for 2021-2027 through tariff revenues has been reported.

The third RBMP reports less-than-full-cost recovery for drinking water provision, with the e-reporting indicating an overall financial cost recovery rate of 88% but without providing a breakdown by service or key user sector. No information is provided on the cost recovery of wastewater treatment services. The reported less-than-full-cost recovery is not justified with reference to 'established practices' exemptions or recovery mitigation factors (Article 9(4) and 9(1) respectively). Unfortunately, the RBMP also does not clearly explain which revenues and costs were considered in the underlying calculations, such as the capital costs corresponding to the investments financed through grants (such as the support from EU funds).

The third RBMP does not present a comprehensive account of the water pricing policy in place and provides no information on wastewater treatment tariffs or charges. Nor does it assess whether the existing pricing instruments provide adequate incentives for efficient water use. However, the incomplete data provided in the e-reporting, together with information available on the website of the Regulator for Energy and Water Services (REWS) suggest that some incentives for a more efficient water use are in place, although notable gaps remain. Specifically, the available information indicates that water tariffs include a volumetric component that increases across consecutive volume brackets. However, the highest volume bracket is exempt for non-residential water users, which renders the overall incentive performance incomplete.

The RBMP does not present what pricing schemes are in place for the agricultural sector, which reported to rely on groundwater self-abstraction and rainwater harvesting. While the PoM mentions a measure to extend the use of reclaimed water for irrigation purposes ('new water'), it provides no information on the corresponding pricing. As regards public water supply, it is unclear whether increased reliance on water desalination during periods of increased water stress is reflected in the water prices.

The third RBMP does not provide an assessment of the application of the polluter-pays principle, nor does it assess whether the contribution of different uses to the costs of water services is adequate. The e-reporting states that no environmental charges are in place, including water abstraction charges reflecting resource costs, water pollution charges or other types of charge. However, it states that financial, environmental and resource costs are partially internalised. In fact, the measure to launch a study to obtain a first appraisal of the environmental and resource costs suggests that a lack of information has so far hindered the effective application of the polluter-pays principle.



6. WFD recommendations

Recommendations – Malta should:

1. Assess the remaining gap to achieving good ecological, chemical and quantitative status, the progress made since the previous rounds, and the estimated effects of the planned measures in the present RBMP. Increase the level of ambition to ensure that sufficient measures are implemented to clearly and demonstrably close the remaining compliance gap.
2. Develop quantitative projections based on updated national climate change scenarios, including projections of water availability and infrastructure capacity. Indicate how climate scenarios have been taken into account in monitoring, assessing pressures and impacts, classifying ecological and hydromorphological status, setting environmental objectives and prioritising measures.
3. Improve the economic analysis to support better decision-making. In particular, provide comprehensive investment and financing planning covering the fourth RBMP and beyond, consistent with the updated national climate change scenarios (see point 2 above) and water resilience objectives. This planning should be explicitly based on long-term projections of water availability, supply and demand under different climate scenarios, including estimates of (a) the future capacity of water systems and infrastructure to cope with water scarcity and droughts; and (b) future water demand arising from population growth and economic development in the agricultural, industrial, commercial and tourism sectors.
4. Ensure the full application of the WFD's cost recovery requirements for water services, including:
 - (a) a transparent presentation of the water pricing policies in place and a clear account of the extent to which they provide adequate incentives for efficient water use;
 - (b) justification of the grounds invoked for less-than-full-cost recovery (including the extent to which capital costs corresponding to grant-funding are recovered);
 - (c) an explanation of the calculations underlying the cost recovery rates for water services, broken down by service and water user sector;
 - (d) an estimation of the financial, environmental and resource costs;
 - (e) a substantiated account of the extent to which the polluter-pays principle has been applied and, more generally, whether the contributions of the various water user sectors can be considered adequate.
5. Improve the robustness of the cost-effectiveness analysis and the prioritisation of measures by making clearer use of quantitative costs and investment data, including forecasts.
6. Identify and put in place all basic measures and any supplementary measures necessary to reduce existing persistent pressures (environmental challenges) that prevent the achievement of good ecological, chemical and quantitative status, as these pressures will be aggravated by climate change. This implies the following.

For water quantity issues:

 - a) Applying and refining the regulatory framework for permitting, strengthening volume-based controls on all groundwater abstraction, including those currently exempt from permitting, conducting periodic permit reviews, and aiming to end all illegal abstraction.
 - b) Stepping up efforts to significantly increase water reuse. Domestic and residential use for households and tourism accounts for a significant share of water consumption, and much of this water is returned to urban wastewater treatment plants. This indicates potential synergies between upgrading the plants and increasing reuse (see point d below).

- c) Enhancing coordination and integration between the RBMP and other relevant plans, programmes, and strategies (the Floods Directive, the MSFD, the Nature Restoration Regulation, relevant climate adaptation strategies and draught management strategies, as well as EU funds).
- d) Setting ecological flow requirements for the three intermittent rivers and linking them to the permitting and permit-review system to secure sufficient flow to protect and restore the ecosystems in these catchments and supporting groundwater recharge and improving the status of the associated groundwater-dependent ecosystems.

For pollution issues:

- e) Intensifying efforts to comply fully with the Urban Waste Water Treatment Directive, including by ensuring secondary treatment or equivalent where required, mitigating sewage overflows and setting up discharge monitoring. This should be considered in conjunction with the need to significantly increase water reuse (point b above).
- f) Stepping up efforts to reduce agricultural pollution from both nutrients and pesticides, including by making use of all available tools under the nitrates action programme and the national action plan for the sustainable use of pesticides. The level of ambition for nutrient reductions should be based on an assessment of the required reductions in nutrient loads and the estimated effects of the relevant measures.
- g) Increasing efforts to protect and improve groundwater chemical status by tackling saline intrusion and reversing sustained deterioration trends for several substances/parameters, including sodium, chloride, sulphate and boron.
- h) Addressing point source and diffuse discharges to coastal waters from industrial operations by making more effective use of the permitting system.

For protected areas:

- i) Clearly detailing the proposed additional measures expected to contribute to the protection and enhancement of water bodies associated with protected areas.

7. Further improve governance, including by:

- a) enhancing coordination between the different administrative levels and authorities responsible for implementing the WFD and other related legislation;
- b) adhering to the WFD timetable when consulting on, adopting and reporting on the updated RBMP, and including a summary of the public consultation;
- c) demonstrating coordination and integration between the RBMP and other relevant plans and programmes, including the Floods Directive, the MSFD, the Nature Restoration Regulation, relevant climate adaptation strategies and drought management strategies.

- 8. Aim to reduce the use of exemptions under Article 4(4), particularly for the chemical status of groundwater bodies and the ecological status/potential and chemical status of surface water bodies; provide detailed information on the application of exemption under Articles 4(4) and 4(5), including detailed justification for each water body; complete the development of the national guidance document on the application of WFD Article 4(7) and ensure its implementation.
- 9. Further close knowledge gaps and improve data availability, accessibility, quality and comparability by harmonising methods and electronically collected data on the river basin district and marine region, including data on monitoring, assessments, projections and economic assessments, and making all data

openly available through timely publication as required by the Open Data Directive and the INSPIRE Directive.

This requires the following immediate actions:

- a) Strengthen the monitoring of surface waters and close the gaps identified in data reporting by covering all relevant quality elements and substances in all water categories, including hydromorphological and physico-chemical quality elements. Include all water bodies at risk of not achieving environmental objectives in operational monitoring. This is important even where surveillance monitoring covers 100% of water bodies, because different frequencies apply depending on the monitoring network. In addition, improve quantitative monitoring of groundwater bodies.
- b) Develop chemical status monitoring programmes to ensure all relevant priority substances (including persistent organic pollutants and pesticides) are monitored. Continue efforts to expand biota-monitoring networks for chemical status assessment beyond coastal areas to include inland waters.

This requires the following actions for subsequent RBMPs:

- c) Develop an analysis of long-term trends in relevant priority substances based on monitoring in sediment and/or biota, in accordance with the requirements of the EQSD.
- d) Further develop the methods to assess the status of surface and groundwater bodies to include considerations of saline and other intrusions in the quantitative status assessment of groundwater, and of baseline levels of substances in the trend assessment as part of the chemical status assessment of groundwater, while distinguishing between naturally occurring and anthropogenic loads.
- e) Continue efforts to establish and intercalibrate type-specific reference conditions for a wider range of quality elements and water categories.
- f) Continue to improve the assessment of ecological potential for HMWBs, including by incorporating more BQEs into the assessment and considering physico-chemical elements.
- g) Complete emissions inventories for relevant RBD specific substances.

SECTION B:

FLOODS DIRECTIVE

7. Flood risk management under Floods Directive (FD)

The Directive requires each Member State to assess its territory for flood risks, evaluate the potential adverse consequences of future floods for human health, the environment, cultural heritage and economic activity, identify significant risks, map flood extent and potential adverse consequences, and take measures to reduce flood risk.

These activities are reflected in:

- (a) preliminary flood risk assessments (PFRAs), including the identification of areas of potential significant flood risk (APSFs);
- (b) the preparation of flood hazard and risk maps (FHRMs); and
- (c) the establishment of flood risk management plans (FRMPs). Preliminary assessments, mapping and flood risk management planning are carried out in six-yearly cycles.

Malta has one Unit of Management (UoM) , which corresponds to the RBD established under the Water Framework Directive. Malta has designated 11 APSFs, with pluvial flooding identified as the most significant source of flooding in Malta.



7.1 Flood hazard and risk maps

Malta has prepared the FHRMs using a similar approach for each APSF. The main difference is the resolution used in the models, with higher resolutions used for highly urbanised areas. For each flood probability scenario, flood hazard maps show run-off depth and flow velocity, while flood risk maps show the flood hazard rating. The maps only refer to rainfall events, as pluvial flooding is the only source identified as significant. Each map also shows the boundaries of each APSF and the built-up areas. Maps are provided for low-probability floods (1 in 2 000 years), medium-probability floods (1 in 50 years) and high probability floods (1 in 5 years).

Malta has published the FHRMs in PDF format, both as an annex to the FRMP and on the website of the Energy and Water Agency²⁶. The FRMP also states that the maps will be available online on the INSPIRE geoportal and the Maltese SIntegraM GIS portal.

All maps provided in PDF format show the following to some extent: flood extent, water depth, flow velocity, type of economic activity, critical infrastructure, cultural heritage and property. However, the maps do not show installations referred to in Annex I to the Industrial Emissions Directive and other significant sources of pollution and areas protected under the Water Framework Directive.

In terms of changes in contextual information (i.e. information to the public) since the first FHRMs, Malta now has an online platform (SIntegraM) that provides flood hazard maps that can be viewed separately for three flood probability scenarios. However, the information presented online is not as complete as that provided in the PDF versions and may be difficult for the general public to access.

In terms of changes in the methodologies used to prepare the flood hazard maps since the first FHRMs, the same two-dimensional hydraulic model was used to model flood risk and hazard, and there is no indication of methodological changes. Compared with the first FHRMs, which included only

²⁶ <https://energywateragency.gov.mt/integrated-river-basin-management/>

one flood scenario, the second FHRMs include three flood probability scenarios representing low, medium and high probability events. Additionally, seven APSFRs have been included, compared with four in the first FHRMs.

Based on the available information, two changes have been made to the flood risk maps since the first FHRMs. These relate to two categories of risk receptors: potentially affected inhabitants and potentially affected economic activities. For the first FHRMs, the number of inhabitants potentially affected was calculated using water utility billing data. In the second FHRMs, there is no information on the number of inhabitants potentially affected by flooding. For the first FHRMs, risks to economic activity were identified through field surveys. For the second FHRMs, qualitative descriptions of potentially affected economic activities are provided, but it is unclear how these activities were identified in the first place.

Climate change in the second FHRMs

For information on how the effects of climate change were considered in the preparation of flood hazard and risk maps, see Section 3.1 on ‘adaptation to climate change’.



7.2 Flood risk management plans

Objectives and measures

The FRMP sets out objectives for the document, rather than providing clearly defined flood management objectives. These objectives focus on updating current and future flood hazards and risks and planning measures to reduce the adverse consequences of flooding. They differ from those presented in the first FRMP and, according to the Maltese authorities, were formulated in broad rather than specific terms.

The FRMP includes 14 measures, although these are not linked to specific objectives. For each measure, the FRMP sets out the measure name, the entity responsible, a description, the potential impact, the stakeholders involved and the implementation timeframe. However, the FRMP does not set out the cost of the measures, either individually or in aggregate. The Maltese authorities subsequently provided a supplementary document setting out this information. Information on funding sources, location and geographical coverage can be derived from the FRMP for at least some measures. The FRMP also sets out the methodology used to prioritise measures, which comprises a multi-criteria analysis, including the indicators and formula used to determine a total score for each measure. The FRMP also describes progress in implementing measures included in the first FRMP.

Several measures relate to nature-based solutions (NBS), particularly in relation to stormwater infrastructure and sustainable drainage systems. Additionally, two measures address habitat conservation and improving ecosystem services. Many of the Maltese measures focus on rainwater collection and management, including using green infrastructure.

Malta has reported that coordination with the WFD was considered in the development of the FRMP, and the plan contains a dedicated section setting out how FD and WFD are implemented in a coordinated manner. It describes the role of the Inter-Ministerial Committee of Water and the National Water Table, in supporting proper implementation of the two directives, the integration of measures and, where necessary, the development of mitigation measures.

Climate change considerations in the second FRMPs

For information on how climate change effects were taken into account in the preparation of flood risk management plans, see Section 3.1 on ‘adaptation to climate change’.

Governance

As an island nation, Malta did not coordinate with neighbouring EU or non-EU countries through EU or bilateral agreements during the development of the FRMP.

However, the competent authorities made efforts to consult the public and involve stakeholders actively, using a broad range of methods from an early stage in the planning process. As a result, a wide range of stakeholders contributed actively during the various stages of plan development. However, the FRMP does not set out the results of these consultations or clearly identify the stakeholders who participated. The Maltese plan emphasises continuous consultation through regular meetings of the National Water Table and the Inter-Ministerial Committee of Water. The public is also encouraged to submit feedback on the FRMP at any time.

Progress identified in the second FRMPs

The second FRMPs include several notable improvements:

- The FRMP clearly describes the PFRA and FHRM processes, setting out the methodology used and the results obtained. It is clear how the PFRA informed the development of the second FHRMs and how the FHRMs were developed and updated for the FRMP. However, it is less clear how the FHRMs informed the development of the second FRMP.
- The FRMP sets out a clear methodology to be used to prioritise measures, including indicators and results. This multi-criteria assessment was not included in the first FRMP, and takes into account cost and benefit considerations, the effectiveness of measures and multi-benefits in terms of the Sustainable Development Goals.
- The FRMP sets out flood-specific consultation activities, including the multi-stakeholder platform and the inter-ministerial meetings, and indicates that consultation activities have significantly expanded between the first and second FRMPs.
- The second FRMP is a separate document from Malta’s RBMP, which makes it easier to use and understand than the first FRMP.



8. FD recommendations

Based on the information reported and the FHRMs and FRMPs assessed, the following recommendations are made to strengthen flood risk management in Malta:

In the FHRM:

- The background documentation should clearly indicate the number of APSFRs and the correspondence between APSFRs and the FHRMs.
- The FHRM should be made as user-friendly and accessible to the general public as possible.
- The FHRM should show the indicative number of inhabitants potentially affected.
- The FHRM should show the types of economic activity potentially affected.

In the FRMP:

- The FRMP should provide details of how the FHRM was used to inform the selection of objectives and measures.
- The FRMP should include an assessment of progress towards achieving its objectives.
- The FRMP should clearly indicate the extent to which the planned measures are expected to achieve the objectives.
- Measures should be linked to the objectives.
- The FRMP should provide information on the cost of the measures.
- The FRMP should describe how the prioritisation method described has affected or will affect the implementation of the measures.
- Insurance should be considered as a possible measure for adaptation to climate change.
- The likely impact of climate change on flood risk should be discussed in detail in the FRMP.
- The descriptions of the measures in the FRMP should clearly indicate their links to climate change adaptation.
- The FRMP should provide details of the public consultation and stakeholder involvement, including the specific stakeholders who participated, the comments received, and how these were considered. Public consultations should aim to last six months.
- Depending on the nature of the measures, the FRMP should be the subject of a strategic environmental assessment.