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

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Action C.2:

Water Eco-label Scheme

Deliverable 2A.1: Analysis and Identification of Eco-labels at European and International Level

August 2023



19th July 2023

Deliverable 2A.1

Development and establishment of a national voluntary water Eco-Labeling Scheme for Water Efficient Devices and Appliances

Energy and Water Agency

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Introduction

The purpose of this report is to satisfy the requirements of Deliverable 2A.1 for the contract Development and establishment of a national voluntary water eco-Labeling scheme for water efficient devices and appliances. In line with contract requirements, this report identifies and describes the existing eco water labels at the EU and worldwide levels, as well as their current uptake and market penetration. Finally, their potential applicability to the Maltese islands is evaluated.

Each of the identified labels are described using the following format:

- Logo and/or layout/visual of the label
- Description of the label
- Products covered
- Current uptake
- Applicability to Malta
- Country coverage
- Regulators
- Regulations
- Other information

Existing Water Efficiency Labels within the EU and at the International Level

1. EU Ecolabel



The EU Ecolabel, which was founded in 1992, is a voluntary environmental label. It promotes goods and services that have lower environmental impacts throughout their life cycle as compared to similar products on the European market. As a result, the system helps to make consumption and production more sustainable.

The *Circular Economy Action Plan* first adopted by the EU in 2015 acknowledges the value of the EU Ecolabel standards in inspiring required legislation and calls for the systematic incorporation of circular economy aspects in the EU

Ecolabel criteria. The EU Ecolabel is a critical tool of the circular economy because it encourages producers, depending on the product group, to use raw materials efficiently, generate less waste and CO₂ during the manufacturing process, use less hazardous chemicals, and develop products that are durable, easy to repair, and recyclable. At the same time, the EU Ecolabel promotes sustainable lifestyles and green procurement by directing consumers, public and private purchasers, and suppliers to products which are considered “good” in terms of environmental performance.

Products covered: The EU Ecolabel is currently operating and it covers different categories of products¹. Previously, it included water-using products categorised under the “sanitary tapware” category. This section included household taps, showerheads, and showers. This section of the EU Ecolabel has been suspended and the UWLA Label took over these items (see further details below). Thus, the EU Ecolabel is no longer active for water products, but is still active for other types of products. A life cycle approach is taken in the assessment of items to be awarded the EU Ecolabel, therefore it takes into consideration various aspects of the lifespan of the production, use and disposal of the product, rather than looking at the operational efficiency in terms of energy use/water use, etc. Therefore, even when the label did cover water-using products, it did not give any prominence to any particular factor and products were simply marked for consumers with logo shown above.

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Current uptake: This Label ceased operations for Water Products. It is unclear why this decision was made or when it was made.

According to information provided by the Managing Director of the Unified Water Label Association (UWLA), Yvonne Orgill, gathered during an e-meeting held on 29/06/2023, the UWLA Label came into the market in 2020 following the discontinuation of the EU Ecolabel for water products. The UWLA incorporated all the EU Ecolabel's standards/criteria for water products and set these within the UWLA. According to the official EU Ecolabel's website the label is still in operation for other product's categoriesⁱⁱ. The following product categories are currently covered by the label: cleaning, clothing, coverings, do it yourself, electronic equipment, furniture and mattresses, gardening, holiday accommodation, lubricants, paper, and personal and animal care products. While the EU Ecolabel represents a label that covers multiple types of products with different criteria, the UWLA label exclusively covers water products. Moreover, the specifics of the UWLA label are described below.

Applicability to Malta: N/A as no longer applicable to water products

Country coverage: All EU Countries, plus Norway, Iceland, and Liechtenstein. The label was founded in 1992, stopped operating for water products in 2020 but continues to be in operation for other products to date.

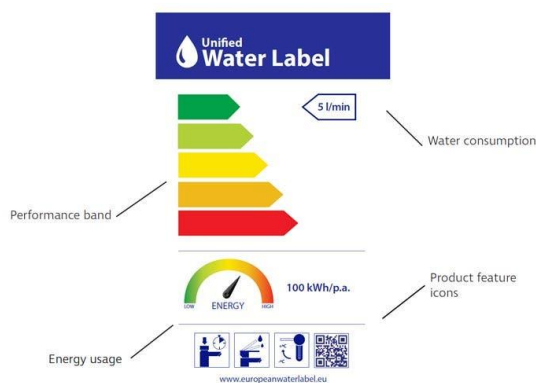
Regulators: EU Ecolabelling Board (EUEB); European Commission and the following twenty-seven Member States: Belgium, Bulgaria, Czech Republic, Denmark, Germany, Estonia, Ireland, Greece, Spain, France, Italy, Cyprus, Latvia, Lithuania, Luxembourg, Hungary, Malta, Netherlands, Austria, Poland, Portugal, Romania, Slovenia, Slovakia, Finland, Sweden, United Kingdom.

Regulations: Directive EU 2013/250/EU

Other information: This Label takes the form of a mark (which is the same design as the logo shown above) for all products and therefore no specific layout/visual for water products could be found

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2. The Unified Water Label Association (UWLA)



Water and energy at a glance

The Unified Water Label Association label was founded in 2020 by a coalition of organisations and industry partnersⁱⁱⁱ, including manufacturers, merchants, and water corporations, with the purpose of developing a worldwide recognised label that promotes water-saving products and aids in the reduction of water use. It replaces the European Bathroom Forum (formed in 2017) which previously governed the Unified Water Label, following the discontinuation of the EU Ecolabel for water products. The European

Bathroom Forum was established in 2017 to ease the establishment of the Unified Water Label. The UWLA incorporated all the EU Ecolabel's standards/criteria for water products and set these within the UWLA. Furthermore, this label was formed by the request of the European Commission (EC) to merge the following eco-labels: WELL (Germany– see section 14. below), Anqip (Portugal – see section 3. below), Water Efficient Labelling Scheme (UK – see section 6. below), Swedish Energy^{iv} (Sweden – only information related to energy is available and therefore no section on this was included in this report), Swiss Energy (Switzerland – No further information is available and therefore no section on this was included in this report). The WELL label did not join such merge while the Portuguese label Anqip is currently finalizing its integration with UWLA.

The Unified Water Label's main goals are as follows:

1. **Standardisation:** The UWL establishes a consistent and universal labelling system for water-using items, allowing customers to better understand and compare water efficiency across brands and nations.
2. **Consumer Awareness:** Consumers are made aware of the product's water efficiency by prominently displaying the UWL on products and can thus make informed decisions based on their sustainability preferences.

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3. Water Conservation: The UWL promotes the development and use of water-efficient goods, as well as responsible water usage and the reduction of global water consumption.

The UWL applies to a wide variety of water-consuming products, such as faucets, showers, toilets, bathtubs, and other plumbing fixtures. Water consumption data, such as flow rate (specified within report 2.A.2) for faucets and showers or flush volume for toilets, are displayed on the label bar type visual indication, as shown in Figure 1 of the report for Activity 2A.2 .

The UWL is a global movement however, its adoption and implementation may differ by country or region as it can be embraced fully as is, or else the requirements of other national water efficiency labelling schemes may be considered^v. The above-mentioned labels were combined to form the UWLA label. As a result, the label's technical standards have been modified to incorporate other eco-labels requirements. Furthermore, the label still considers that other countries or labels may join the scheme and therefore this could potentially lead to more changes to labelling requirements.

Products covered: Showers, systems, hand showers, electric taps, WCs, urinals (including bowls, independent flushing cisterns, controllers and flush free), baths, recirculating showers (recently introduced), and spray WCs.^{viii}

Current uptake and market penetration: Research conducted in July 2019 by the European Bathroom Forum with the European Water Label evaluated the growth of the European Water Label from 2008 to 2019, prior to it merging with other labels to become the UWLA in 2020. The table below shows the data from the European Water Label (previous name of the UWLA label), and depicts the increase in registered items with the Label throughout the aforementioned time period^{vi}:

	Product Registrations	Company Registrations
2008	800	18
2009	1069	22
2010	1288	23
2011	1904	29
2012	2343	39
2013	3600	50
2014	7350	73
2015	8300	89
2016	9750	120
2017	10900	132
2018	11000	143
2019	11864	154

Table 1: UWLA Product Registration 2008-2019^{vi}

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As it can be observed in the table between 2016 and 2019 during the transition from European Water label to UWLA, company registrations for the Unified Water Label grew by 20%, while product registrations increased by 26%. The data contained in the table excludes data from Swedish Energy, Swiss Energy and Anqip due to the ongoing merge at the time. From 2020 the label was merged with other European labels and the name updated to UWLA. This has been explained above. Therefore in the time period shown in the study, the European Water Label was being run in parallel with the other labels it eventually merged with, as well as the EU Ecolabel.

The registered brands within the label were projected to have a market share of more than 68% of the taps and shower units sold in the European market by the end of 2021, according to this study carried out in 2019. Such results were identified taking in consideration the four schemes (Swedish Energy, Swiss Energy, Anqip and UWLA) consolidating registrations into a single central database.^{vi} All the items currently covered by the label can be found in the single central database (link included as endnote^{vii})

The World Plumbing Council released some details on the uptake of the UWLA label in March 2023. This demonstrated an increase in product registration from 2008 to 2023 in the label as shown in the following Table:

	Product Registrations	Company Registrations
2008	800	18
2009	1069	22
2010	1288	23
2011	1904	29
2012	2343	39
2013	3600	50
2014	7350	73
2015	8300	89
2016	9750	120
2017	10900	132
2018	11000	143
2019	11864	149
2022	14041	155
2023	15,700	160+
Products removed	6845	
Company's removed		11
Cleansing of scheme annually to ensure its fresh and only contains products available in the market are visible on the database		

Table 2: UWLA Product Registration 2008-2023^{viii}

Between 2019 and 2023, 3836 new products were registered. Also, recirculating showers have been recently introduced within the Label. Finally, Anqip and UWLA are on schedule to completely align by the end of 2023 at no additional cost to producers.

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Applicability to Malta: Malta is already recognised by UWLA and can use the label. The UWLA website already lists items covered by this Label from manufacturers of products that are available in Malta.

Countries covered: The Unified Water Label has been adopted in 34 European countries, not all of which are members of the European Union, such as Egypt, which has made the label mandatory.

Regulators: Unified Water Label Association

Main regulations: Set of criteria; included within ISO 31600 Standard as an example of a good model^{ix};

Other information: According to information provided by the Managing Director of the UWLA, Yvonne Orgill, gathered during an e-meeting held on 29/06/2023, the UWLA audits 5% of their 17000 products every year to ensure compliance with the Label. The Label is currently undergoing ISO 31600 Certification.

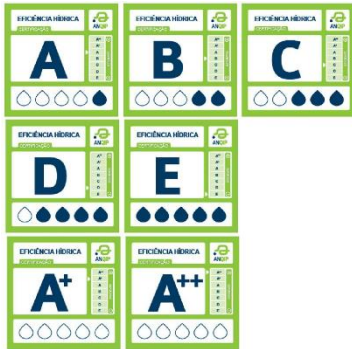
The energy indication within this Label: This Label's Energy indicator reflects the amount of energy needed to heat water, which can be a substantial influence on the cost of running appliances at home.

As a result, the Energy indicator on the Label does not accurately reflect the appliance's energy usage. Additionally, products like washing machines and dishwashers are not currently covered by this Label^x.

Furthermore, research on the Association's website revealed that many of the products covered by this Label are already available in Malta^{xi}. The Label's website includes a "Find a Product" tool which enables users to search for products by category, efficiency rating, registered companies, available country, or a combination of these criteria. Inserting Malta into the "Country Available in" column provides the result that 2580 goods which should already be accessible on the local market. However, the actual availability of these products in the local market should be assessed further because the product's location criteria are submitted by the manufacturers.

3. Associaca Nacional Qualidade Instalces Prediais (Anqip)

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Anqip is a non-profit technical-scientific association whose overall goal is to promote and ensure the quality and efficiency of building services, with a focus on the building water cycle and sustainability issues.

The Portuguese-based Anqip has been entrusted with focusing on incentives and effective promotion mechanisms for technological development and scientific research at the level of building installations such as water supply, drainage, or green roofs.

Anqip, in partnership with the Programa Nacional para o Uso Eficiente da Água (National Program for an efficient use of water- PNUEA), chose a voluntary model in which an A grade is regarded as optimal and considers not just water efficiency but also the user-friendliness and performance of the equipment in question. Anqip regulates the process by randomly testing branded products on the market on a regular basis. Certification can also be issued for items which have adjustable flow or temperature settings, on the basis of the most efficient position for these items, as long as the criterion is apparent to the consumer.

Products covered: Flushing cisterns, showers and shower systems, flow reducers and valves and flow meters (toilets, showers and taps).

Current uptake and market penetration: The only data available regarding current uptake of this label is that 110 toilets have been awarded the label representing 75% of the national market in Portugal.^{xxv} No further details about market penetration are available. The Label is currently merging with the UWLA Label, with a complete fusion planned by the end of 2023^{viii}. No other information on the current uptake of the Label was found..

Applicability to Malta: This label is run by a non-governmental organisation operating in Portugal. No other countries within the European Union have joined the Anqip label yet. However, a merging procedure with UWLA label is currently ongoing. The label complies with European Standard for WCs and urinal flushing cisterns (prEN 14055:2007). The label is established only in Portugal and other countries of Portuguese language (this was specified in an-email received on 10/07/2023 from the label's Director).

However, no further information on its uptake in other countries was forthcoming.

Country covered: Portugal and other Portuguese speaking countries.

Regulators: Portuguese Association for Quality and Efficiency in Building Services (Anqip).

Main regulations: Issued by Anqip^{xiii}/ Complies with European Standard for WC and urinal flushing cisterns (prEN 14055:2007).

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4. The Water Technology List (WTL)



The Water Technology List (WTL) was a British programme that promoted the use of water-efficient technologies. It was part of the Enhanced Capital Allowance (ECA) scheme, a government incentive that grants tax breaks to firms who invested in energy and water saving technologies. The WTL focused primarily on water-efficient goods and technology that met strict water-saving standards^{xiii}.

The Department for Environment, Food and Rural Affairs (DEFRA) established the programme in 2003. Its primary goals were to encourage businesses to invest in more sustainable technologies:

- by giving a fiscal incentive to users (for every £1000 spent, the company pays £280 less tax);
- to serve as a marketing tool for manufacturers;
- to promote innovation.

The two most important criteria the product had to meet were: positive water conservation or quality outcome that is long-lasting and observable, and market penetration must be minimal (typically less than 30%). The scheme covered a wide range of water-saving technologies (see “Products Covered” section below) and Defra ([Department for Environment, Food & Rural Affairs – UK](#)) determined a certain number of products of the scheme to be audited every year.

The tax relief under the ECA scheme allowed businesses to offset the full cost of these technologies against their taxable profits in the year of purchase, significantly reducing their tax liability.

Products covered: taps, showers, toilets, washing machines, flow controllers, and other water related equipment which may have more industrial; applications such as: cleaning in place equipment, greywater recovery and reuse equipment, meters and monitoring

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equipment, rainwater harvesting equipment, water management equipment for mechanical seals and water reuse equipment¹.

Current uptake and market penetration:

Odyssey-Mure, an institution that studies energy and water schemes across Europe, analysed the ECA scheme's impact in 2016 and determined that it had a medium impact^{xiv}.

As of July 2018, 3,385 products had been registered on the system, divided into 14 categories, as shown in Table 3 below. Showers, faucets, and toilets accounted for 18% of all registered items.

Technology	Number of products registered
Cleaning in place equipment	340
Efficient showers	160
Efficient taps	204
Efficient toilets	238
Efficient washing machines	176
Flow controllers	45
Greywater recovery and reuse equipment	45
Leak monitoring and control equipment	73
Meters and monitoring equipment	384
Rainwater harvesting equipment	1129
Small scale slurry and sludge dewatering equipment	26
Vehicle wash water reclaim units	83
Water efficient industrial cleaning equipment	455
Water management equipment for mechanical seals	27
Total	3385

Table 3: WTL's Registered Products in 2018^{xiv}

¹ Cleaning in place equipment (CIP) - automated systems used to clean the interior surfaces of food and beverage process pipes.

Greywater recovery and reuse equipment is equipment which collects grey water (eg: water from sinks and showers) and recycles it within a system to use for other purposes (eg: flushing). Treatment of such water may be included in such a system - depending on the scale and complexity of it.

Meters and monitoring equipment are other types of meters or in place monitoring systems which are meant to be placed in water. These are most likely industrial in application.

Rainwater harvesting equipment is equipment which is used to collect (and perhaps also treat depending on the parameters, complexity, etc) rainwater for use within a system.

Water Management Equipment is generally industrial equipment and includes items such as: industrial valves, sedimentation tanks, filtration systems, disinfection equipment, softening equipment, membrane systems, mixers and aerators, clarifiers, amongst others.

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Applicability to Malta: The label was operating only in the UK, was government-led. It has now ceased operation^{xv}. The only information found as to why it ceased operation was "The Government has taken this decision because there are more effective ways to support water efficiency"^{xvi}

Country covered: United Kingdom.

Regulators: Water Regulations Approval Scheme (WRAS).

Main regulations: BS 6920 (British Standard), Water Supply (Water Fittings).

Other information: This label's layout/visual could not be found.

Ceasing of activity: On 29 October 2018, the Chancellor announced that the Enhanced Capital Allowance for energy and water efficient plant and machinery will end in April 2020.

Therefore, the Water Technology List scheme ended on the 1st of April 2020 for companies and on the 6th of April 2020 for unincorporated businesses^{xvii}.

5. Waterwise Checkmark



The Waterwise Recommended Checkmark scheme identifies the most water-efficient products and services on the market in the United Kingdom. The Checkmark can either be used by a manufacturer or by a service provider to demonstrate best practices and innovation in water efficiency and/or to provide clear point-of-sale information to the buyer. Waterwise Checkmarks are given to products and services that improve water efficiency or reduce water waste.^{xviii}

The Waterwise Checkmark is a water efficiency label used in the United Kingdom. It is designed to help consumers identify water-efficient products that can contribute to water conservation efforts. The label is awarded to products that meet specific water-saving criteria set by the Waterwise organization. The Waterwise Checkmark is awarded to products that demonstrate significant water savings compared to standard alternatives. These products have undergone testing and evaluation to ensure their water-saving performance. The specific criteria for obtaining the Waterwise Checkmark may vary depending on the product category. It typically involves measuring the product's water consumption or efficiency against recognized benchmarks or industry standards.

Products covered: Toilets, taps, showers, washing machines, dishwashers, irrigation systems and rainwater harvesting systems

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Current uptake and market penetration:

The label initiated in 2006 as Waterwise Marque, the first scheme of its kind in the UK. After 5 years from its introduction, the label was suspended for a number of years. In 2018, the label was re-introduced as water efficiency became an important aspect of the national policy agenda in the UK. Waterwise drives water efficiency within the UK, it has developed and implemented a strategy which is visionary and pragmatic. For more information it is advised to read their strategy on Waterwise website^{xix}.

The sole study discovered that examined this label was in 2019^{xiv}, which is very close to its reintroduction date. As a result, no information about the current uptake of Waterwise Checkmark could be found.

Applicability to Malta: The label is currently operating only in the UK, and is led by a non-profit organisation. No other country has implemented such Label. The Label makes reference to the compliance to “Environment Act 2021” which is an Act developed in UK. Its applicability in Malta is considered minimal because no references to EU regulations and directives have been found, nevertheless, details on the concept and requirements governing the label are provided in the Report for Deliverable 2A.2 ^{xiii}.

Countries covered: United Kingdom

Regulators: Waterwise

Main regulations: No clear Information found. The assessment is carried out by waterwise employees or checkmark reviewers assigned by their partners and consists of assessing the application form and supporting documentation.

Other information: This label's layout/visual could not be found.

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6. Water Efficiency Labelling and Standards (WELS)



The Water Efficiency Labelling and Standards (WELS) scheme is an Australian government initiative. It was established in 2005 as a national instrument to encourage more efficient domestic water use and reduce demand for potable water by informing consumers about water efficiency at the point of sale.

Its objectives are to:

- conserve water supplies
- inform consumers about water efficiency via a star rating, with a higher number of stars signifying more water efficiency
- promote innovation and adoption of efficient and effective water saving technologies.^{xx}

Suppliers and merchants must ensure that labelled items meet the Australian government's water efficiency guidelines. White products in Australia must also be registered with the Equipment Energy Efficiency programme, which includes the Australian energy label; the same is required in New Zealand.

WELS has had significant success in encouraging water conservation measures in Australia. The campaign reduces water use, lowers household utility bills, and contributes to the sustainable management of water resources by promoting water-efficient goods. It also develops a culture of water awareness among customers by encouraging innovation in the creation of water-saving technologies.

The government examines and changes the water efficiency criteria on a regular basis to reflect technological advances and to ensure that the system remains efficient in meeting its objectives.

Products covered: Showers, toilets, urinals, taps, flow controllers, washing machines, combined washer-dryer, and dishwashers.

Current uptake and market penetration: The analysis of a study conducted in 2018^{xxi} shows that the WELS scheme is having a significant impact on water usage across urban Australia.

The conservation of water supplies was associated with an even larger (in value terms) saving in energy usage, mostly from avoided water heating. In turn, the reduced energy usage flows through to a substantial decrease in GHG emissions.

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Applicability to Malta: From an e-mail received from: WELS@dcceew.gov.au it was confirmed that the Water Efficiency Labelling and Standards (WELS) scheme only applies to Australia and New Zealand.

Countries covered: Australia and New Zealand

Regulators: WELS; Australian Government; National Association of Testing Authorities (NATA)

Main regulations: WELS is governed by the Water Efficiency Labelling and Standards Act of 2005. The Australian Standard AS/NZS 6400:2016; ISO 31600:2022. The WELS includes specific Standards for many category of products.

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7. Water Efficient Products Labelling Scheme (WEPLS)



Water Efficient Products Labelling Scheme (hereinafter referred to as WEPLS) is one of the water conservation initiatives taken by Suruhanjaya Perkhidmatan Air Negara (SPAN) in promoting good practices of water demand management in Malaysia. The National Water Services Commission (SPAN) is a technical and economic regulatory body for the water supply and sewerage services in Malaysia (Peninsular Malaysia and Federal Territories of Putrajaya and Labuan).

Products participating in WEPLS incorporate a water efficiency label that serves to inform the consumers of its efficiency rating.

Consumers will be able to take these factors into account when making their purchasing decision^{xxii}.

WEPLS was created with the following goals in mind:

- to raise public awareness of the availability of water efficient products;
- to encourage a healthy water consumption habit among consumers;
- to promote a green lifestyle by using water efficient products;
- to encourage suppliers in the development and marketing of water efficient products in Malaysia;
- to motivate the introduction of cost-effective and water efficient technologies in Malaysia.

This project has lately been highlighted as one of Malaysia's important water demand control initiatives. However, the Malaysian Water Services Division currently believes that the use of water-saving items as a result of the WEPLS scheme has been insufficient. As a result, Malaysia aims to make their scheme mandatory in the near future in order to improve water efficiency. The conformance of each product to the Malaysian standard as established by SPAN is required for WEPLS registration in Malaysia.

Products covered: Water taps, toilets, urinals, washing machine, showerhead.

Current uptake and market penetration: Malaysia's WEPLS scheme is voluntary and run by the government. This project's failure has been linked to its voluntary character; as a result, the Malaysian Water Services Division aims to make the scheme mandatory in the future. Furthermore, although the amount is minor, Malaysia's system imposes an application fee, which they are looking to eliminate to boost success.

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Applicability to Malta: The label is currently operating only in Malaysia, it is government-led, and no other country has implemented such a label. Its applicability in Malta is considered minimal because no references to EU regulations and directives have been found.

Country covered: Malaysia

Regulators: SPAN (The National Water Services Commission is the national regulatory body for the water and sewerage industry for Peninsular Malaysia and the Federal Territory of Labuan).

Main regulations: Ad hoc guidelines were created and are currently used within this voluntary water efficiency product labelling programme^{xxiii}.

8. WaterSense



WaterSense is a voluntary labelling program established by the United States Environmental Protection Agency (EPA) in 2006 to promote water efficiency and conservation. The program encourages the use of water-efficient products and practices to reduce water consumption and protect water resources.

In addition to product labelling, the WaterSense program also promotes water-efficient practices in various sectors, including residential, commercial, and industrial. It provides educational resources, guidelines, and best practices for water management. The label encourages consumers, businesses, and communities to adopt water-saving behaviours and technologies.^{xxiv} In addition to labelling goods, WaterSense identifies residential properties that fulfil a variety of product and design criteria, as well as irrigation expert certification programs. The products that use around 20% less water compared to standard water consumption (as determined by federal regulations or market norms) are accepted and certified by the label. This is regulated by the EPA (Environmental Protection Agency). However, depending on the product type, the exact efficiency ranges from 15% to 50%. WaterSense tries to provide performance criteria in addition to efficiency criteria in order to meet user expectations.

Every product specification includes efficiency and performance requirements for each product type, as well as the appropriate test protocol(s). Licensed Certification Bodies (LCBs) do the necessary testing, keep certification files, and report certified products to

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the EPA. Although LCBs must be certified separately for each product category, many offer certification for complete suites of items (for example, all plumbing products or all irrigation products).

WaterSense collaborates with industry and participates in industry standard committees whenever possible. This enables WaterSense to base specifications on existing industry standards and test methodologies rather than developing them from scratch. This reduces development costs for the US-EPA and compliance costs for businesses while also engaging the manufacturing industry, and increases popularity and product registrations into the program.^{xxv}

Products covered: Residential toilets, showerheads, bathroom faucets, commercial toilets, urinals, spray sprinkler bodies and irrigation controllers.

Current uptake and market penetration: WaterSense labelled products are available in the United States and Canada. WaterSense labelled homes and professional certification programs are only available in the United States. As of 2017, there were 27,630 labelled products. The label is voluntary, but it does have a high market penetration and consumer recognition. Many stores allow filtering and searching for WaterSense products on their websites, which demonstrates this. WaterSense's success may be attributable in part to its status as a quality mark rather than a rating scheme.^{xxv}

Applicability to Malta: The label is currently operating in USA and Canada established by United States Environmental Protection Agency (EPA). Its applicability in Malta is considered minimal because no references to EU regulations and directives have been found.

Country covered: USA and Canada.

Regulators: EPA (Environmental Protection Agency).

Main regulations: Licensed Certification Bodies (LCBs).

Other information: The graphic label shown above differs from the others as it does not indicate directly to the consumer the water efficiency of the product. The WaterSense label is used to designate a product or home that meets EPA's criteria for water efficiency and performance, or a professional certification program that meets EPA's program specifications.

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9. Chinese Water Efficiency Label (CWEL)



In China, the water efficiency label is known as the "China Water Efficiency Label" or "China Water Efficiency Labelling Program" (CWEL). The Chinese Water Efficiency Label initiative is a mandatory government-mandated policy administered by the Ministry of Housing and Urban-Rural Development (MOHURD) and the Ministry of Water Resources (MWR). The program aims to promote water-saving practices and encourage the use of water-efficient products. The sitting toilet was the first product covered by this Label.

The implementation mechanism of the China Water Efficiency Label scheme could be classed as manufacturer self-declaration.

The label which contains information for recordkeeping, and government market monitoring. Based on the findings of the testing, manufacturers can print and affix the water efficiency label on the product or its packaging. The manufacturers then ask the government (China National Institute of Standardisation) to file and publicise the information. The application, registration, and information submission are all free of charge.

The China Water Efficiency Labelling Program covers a wide range of water-consuming products, including toilets, faucets, showers, washing machines, dishwashers, and more. These products are evaluated based on their water-saving performance and assigned a rating or label indicating their water efficiency.

The specific criteria and requirements for obtaining the China Water Efficiency Label may vary depending on the product category. The label provides consumers with information about the water efficiency of a product, allowing them to make more informed choices and select products that help conserve water.

Products covered: Faucet, sitting toilet, shower, urinal, toilet flushing valve, clothes washer, squatting pan, RO purifier.

Current uptake and market penetration: The China Water Efficiency Label (CWEL) is meant to be a required regulation but has not yet been fully adopted (China Legislation Standard, 2021). Taps, urinals, showers, and squatting toilets were scheduled for 2021 but have yet to be installed. Commercial, industrial, and irrigation water-use appliances are also likely to be included on the label.

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China Quality Certification Centre has granted approximately 7000 certificates of water-saving goods to date, with over 400 firms certified. The mark saved 5.28 million m³ of water resources in 2017, by certifying three types of products: toilets, water faucets, and showers.^{xxv}

Applicability to Malta: The Label is currently operating in China. Its applicability in Malta is considered minimal because no references to EU regulations and directives have been found. The Label is regulated by Chinese National Standards such as GB 25501-2010.

Country covered: China

Regulators: National Development and Reform Commission; Ministry of Water Resources (Chinese Government).

Main regulations: GB 25501-2010.

Other information: CWEL scheme's implementation methodology is based on self-declaration by manufacturers who give information for its records, as well as market oversight by the government^{xxvi}.

10. Water Efficient Products-India (WEP-I)



Water Efficient Products-India (WEP-I) was created in collaboration with IAPMO-India and the Technical Committee (TC) of the Indian Plumbing Association (IPA). Water Efficient Products-India (WEP-I) is a document which includes a set of guidelines (criteria in respect to water-efficiency products) for all those engaged in the design, engineering, manufacturing, testing, and certification of water efficient plumbing fixtures,

fittings, and materials in India. This label is voluntary.

The label's goals are to:

- give reliable information on water-saving products and behaviours.
- promote awareness of the significance of water efficiency and recommend water-saving products.
- support consumers in making informed decisions on water-saving products.^{xxvii}

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It makes use of a three-star rating system that shows the water efficiency of water-using products. As green buildings are high on the agenda for India and they include all sustainable criteria, including water efficiency, there is a need for products that can demonstrate their water efficiency, giving both customers and builders options when purchasing and installing new products.

WEP-I strives to:

- Convey accurate knowledge about water-saving goods and activities.
- Raise awareness of the value of water conservation and suggest water-saving goods.
- Assist customers in making educated decisions about water-saving goods.

Since each product must provide the same or better efficiency as traditional non-water efficient products, the functionality of all water efficient products is critical. Certification to a water efficiency rating standard, such as IAPMO India's Water Efficient Products-India (WEP-I)^{xxviii}.

Products covered: European toilets, urinals, shower heads, lavatory sink faucets

Current uptake and market penetration: The scheme has yet to be evaluated as it is not in use yet ^{xxv}.

Applicability to Malta: The Label has not begun operating yet. The Label was developed jointly by IAPMO-India and the Technical Committee (TC) of the Indian Plumbing Association (IPA). Its applicability in Malta is considered minimal because no references to EU regulations and directives have been found.

Country covered: India.

Regulators: IAPMO India and Indian Plumbing Association.

Main regulations: Water Efficient Products-India (WEP-I) – set of guidelines for all those engaged in the design, engineering, manufacturing, testing, and certification of water efficient plumbing fixtures, fittings, and materials in India.

Other information: WEP-I's water label layout/visual could not be found.

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11. Mandatory Water Efficiency Labeling (MWELS)



In Singapore, the water efficiency labelling scheme is known as the Mandatory Water Efficiency Labelling Scheme (MWELS) which regulates certain water-using products. MWEL is a mandatory labelling program introduced by the Public Utilities Board (PUB) in Singapore to promote water conservation and encourage the use of water-efficient products.

The Mandatory Water Efficiency Labelling Scheme (MWELS) was implemented in 2009 to support consumers in making educated purchasing decisions when purchasing water fittings and appliances. This scheme also encourages suppliers to introduce more

environmentally friendly items to the Singapore market. Products are labelled between 0-tick to 3-ticks to showcase water efficiency. In addition, to MWELS, minimum water efficiency standards for water fittings were set in 2009. Water fittings with at least a "1-tick" water efficiency rating are required in all new constructions and existing premises undergoing refurbishment. PUB has also implemented 1-tick minimum water efficiency standards for taps/mixers as of 1st April 2017 (i.e., only taps/mixers with at least a 1-tick rating are allowed to be sold/supplied in Singapore). In 2011, MWELS was expanded to include domestic clothes washing machines. For the latter the minimum water efficiency standard was raised from 1-tick to 2-ticks (i.e., 2-ticks and 3-ticks only) in October 2015. Furthermore, the Public Utilities Board developed a 4-tick rating within the 3-tick rating group on April 1st 2017, to allow for clearer separation of water efficient clothes washing machines in light of more water efficient washing machines on the market. No financial incentives were proposed as part of this label. However, registration of the products is free.^{xxix}

Mandatory products covered: Basin taps and mixers, sink taps and mixers, bib taps and mixers, dual flush low capacity flushing cisterns (dual flush LCFCs), urinal flush valves/waterless urinals, clothes washing machines intended for household use, dishwashers intended for household use.

Voluntary products covered: Showerheads.

Current uptake and market penetration: MWELS labelled products in Singapore are generally produced in other countries. The products are offered, advertised, displayed for sale and supply in Singapore by suppliers, distributors, retailers, and hardware stores.

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PUB has achieved significant strides in water efficiency over the years. In 2017, 143 litres were utilised per person per day in Singapore, down from 165 litres in 2003. The current objective is to reach 140 litres by 2030. In terms of Singapore consumers' acceptability, a market survey commissioned by PUB in 2016 revealed that sales of 3-tick WELS-rated washing machines climbed from 37% in 2011 to 88% in Q1 2016. This significant increase in sales reflects a shift in consumer behaviour and an increased desire for water-efficient products.

Applicability to Malta: Its applicability in Malta is considered minimal because no references to EU regulations and directives have been found.

Country covered: Singapore.

Regulators: Singapore National Water Agency - The Public Utilities Board (PUB).

Main regulations: Products are certified in accordance with SAC CT 19 for ISO/IEC Type 1a certification scheme.

12. The Green Labelling Scheme on water fixtures (UAE)



The Green labelling scheme on Water Fixtures was founded by the Ministry of Environment and Water (MoEW) and the Emirates Authority for Standardisation and Metrology (ESMA) in 2013 and covers all products covered by the green products mark. The label was established as the sole standardising organisation in the UAE under Law No. 28/2001. ESMA is an official UAE Certification member organisation that seeks to assist national companies in competing on a worldwide basis. ESMA is a component of the Emirates' environmental strategy, with the goals of:

- Achieving a sustainably high quality of life;
- Attracting investment and providing job opportunities for citizens;
- Enhancing national security in the energy and water sectors;
- Improving the state's reputation internationally and maintaining its leadership position.

The label requires that water fixtures be marked with the Green Label, which contains information such as water usage and efficiency level for the benefit of consumers, in addition to creating a "maximum flow rate per minute" for covered water faucets^{xxx}.

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Products covered: Faucets, Showerheads, Urinal Flush System, Toilet Flush System, Bidets

Current uptake and market penetration: No evaluation or uptake of this label could be found.

Applicability to Malta: Its applicability in Malta is considered minimal because no references to EU regulations and directives have been found.

Country covered: Unites Arab Emirates.

Regulators: Ministry of Environment and Water.

Main regulations: UAE Assessment scheme.

13. Eco Mark



ECO MARK

Japan-based environmental certification awarded to products featuring low environmental loading throughout the product lifecycle.
This can only be acquired by Japan models.

Japanese consumers are familiar with the "Eco Mark" environmental labelling programme. It was started in 1989 by the Japan Environment Association (JEA) with the goal of promoting green goods and

services. This mark similarly to the EU Ecolabel, covers a wide range of products and services across various sectors. The Eco Mark programme promotes environmentally sustainable (ecological) lives through informed product selection. A commission comprised of academics, governments, consumer groups, and industry specialists establishes standards and oversees certification. The Eco Mark is given to products that have a lower environmental impact than equivalent products throughout their full life cycle, from extraction and collection of raw materials to production, distribution, use and consumption, disposal, and recycling. The JEA certifies and publicises products that qualify for the Eco Mark after assessing eco-friendly products submitted for approval by producers.

Products that pass stringent environmental standards throughout their life cycles, such as resource conservation, energy efficiency, waste reduction, and chemical safety, are given the Eco Mark certification. Products that bear the Eco Mark have undergone a review procedure and have been found to be less harmful to the environment than comparable conventional products.

The Eco Mark is optional and applies to a wide range of product categories, including office supplies, building materials, electronics, appliances, cleaning supplies and more.

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By highlighting goods that have complied with the necessary environmental criteria, it seeks to assist consumers in making ecologically friendly decisions.

The water-using items covered by this mark are classified as Category 158. There is not much information available about this mark's water efficiency regulation.

Products covered: Water saving disc, Constant flow regulating valve, Aerator cap, Flow control valve, and certain showerheads.

Current uptake and market penetration: The Scheme covers around 50 product categories and has certified 5419 products.

Applicability to Malta: Its applicability in Malta is considered minimal because no references to EU regulations and directives have been found.

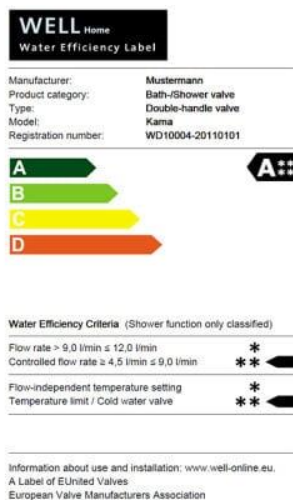
Country covered: Japan.

Regulators: Japan Environment Association (JEA).

Main regulations: The management of this scheme is managed in accordance with the standards and principles of ISO 14020 and 14024.

Other information: This Label's layout/visual could not be found.

14. Water Efficiency Label (WELL)



This label is based in Germany, and it is unclear when it began operations. According to their website^{xxxi}, the label was designed by the European sanitary valves industry.

WELL's label attempts to raise customer awareness about water and energy conservation. The label applies to several water-using products, which are listed below.

Products covered: wash basin valves, shower valves, shower heads and shower hoses, urinal flush systems, WC flush systems and accessories^{xxxi}.

Current uptake and market penetration: many details about the label's current uptake could not be located. However, the label's website only shows 10 registered products from 5 distinct brands. Also, the studies referenced within this report did not include this label.

Applicability to Malta: The information found regarding the label did not mention any other link with other countries in or outside the EU. Further, there was no information found on the compliance of the label to European directives/regulations.

Country covered: Germany

Regulators: WELL

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Main regulations: The label's website contain a document named "[WELL Classification Scheme](#)". This document contains the requirement for each category of product. The business that wish to join the label need to provide the label a compliance declaration as stipulated in ISO/IEC 17050-1^{xxxii}.

Other information: This label provides indication also on the energy consumption (kWh/min.) at a determined water flow pressure and temperature. Other particular of this label regard the measurement of three other characteristics:

- temperature – this feature of the label provides to the mixers an independent setting of temperature from the water flow rate.
- time (public) – this characteristic regulates the self-closing function of the valves. These products are provided of automatized self-closure after a specific timeframe of activation.
- noise class – this feature indicates the valves' noise class levels. This assessment is conducted because fast-flowing water through valves can induce eddy currents, which cause noise.

Combined water-energy eco-labels

Currently, there is no widely adopted or mandated combined water-energy efficiency label for products. While separate labelling schemes for energy efficiency and water efficiency exist, there is no unified label that combines both aspects into a single designation. Manufacturers may voluntarily provide information on both water and energy efficiency for their products.

Various countries and regions have implemented energy labelling programs to provide standardized information on the energy efficiency of products. These labels typically focus on energy consumption and efficiency ratings, allowing consumers to compare and choose products based on their energy performance. The only labels which provides some information on energy usage is the Unified Water Label Association (UWLA) and the Water Efficiency Label (WELL). Refer to the relevant section above for details.

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(sent electronically)

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3rd August 2023

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