



Specific Support on the Development of a National Open Access Policy in Malta **Background Report**

Horizon 2020 Policy Support Facility



Specific Support on the Development of a National Open Access Policy in Malta – Background Report

European Commission
Directorate-General for Research and Innovation
Directorate G – Research & Innovation Outreach
Unit G.1 – ERA & Country Intelligence

Contact (H2020 PSF coordination team):
Magda De CARLI, Head of Unit G.1 – Magda.DE-CARLI@ec.europa.eu
Stéphane VANKALCK, PSF Head of Sector, Unit G.1 – Stephane.VANKALCK@ec.europa.eu
Annamaria ZONNO, PSF Team Leader, Unit G.1 – Annamaria.ZONNO@ec.europa.eu
Petra KENNEDY, Coordinator of the Specific Support on the Development of a National Open Access Policy in Malta, Unit G.1 – Petra.KENNEDY@ec.europa.eu

RTD-PUBLICATIONS@ec.europa.eu

European Commission
B-1049 Brussels

Printed by DG RTD in Belgium

Manuscript completed in December 2019.

This document has been prepared for the European Commission, however it reflects the views only of the authors, and the European Commission is not liable for any consequence stemming from the reuse of this publication.

More information on the European Union is available on the internet (<http://europa.eu>) .

Luxembourg: Publications Office of the European Union, 2019

PDF ISBN 978-92-76-10159-8 doi: 10.2777/186088 KI-AX-19-013-EN-N

© European Union, 2019

Reuse is authorised provided the source is acknowledged. The reuse policy of European Commission documents is regulated by Decision 2011/833/EU (OJ L 330, 14.12.2011, p. 39).

For any use or reproduction of photos or other material that is not under the copyright of the European Union, permission must be sought directly from the copyright holders. Cover page Image: © Eurotopo.be 2017. Source: Fotolia.com.

***Specific Support on the Development of a
National Open Access Policy in Malta***
Background Report

Prepared by independent expert:

Elma Dujso

Table of Contents

LIST OF ACRONYMS	3
INTRODUCTION	4
1 THE MALTESE RESEARCH LANDSCAPE	5
1.1 R&D SPENDING.....	5
2 HIGHER EDUCATION IN MALTA	6
3 SCIENTIFIC OUTPUTS: PUBLICATIONS	7
4 OPEN ACCESS IN MALTA	9
4.1 MALTA'S SHARE OF OPEN ACCESS	9
5 OPEN ACCESS IN MALTA – PUBLICATIONS PERSPECTIVE	12
5.1 THE UNIVERSITY OF MALTA LIBRARY.....	12
5.2 UNIVERSITY OF MALTA OPEN ACCESS POLICY	14
5.3 OPEN ACCESS USE.....	14
BIBLIOGRAPHY.....	16

List of Tables

Table 1: Overview of Maltese publications in Open Access journals.....	11
--	----

List of Figures

Figure 1: R&D intensity, EU-average and selected EU-MS.....	5
Figure 2: Number of publications with a Maltese author (2013-2018)	7
Figure 3: Publications in five journals where Maltese authors publish most (2013-2018)	8
Figure 4: Shares of OA publishing in 2016 (EU Member States)	9
Figure 5: Share of OA publishing in countries where it is less than 20 % (2010-2016)	10
Figure 6: Open Access publications and outputs (2009-2017).....	10
Figure 7: Total items uploaded on OAR@UM (by the end of 2018).....	13
Figure 8: Shares of OA and non-OA publications in Wikipedia, 2012-2015.....	14
Figure 9: Public perception of Open Access, 2013	15

LIST OF ACRONYMS

OA	Open Access
UM	University of Malta
GDP	Gross Domestic Product
R&D	Research and Development
MCAST	Malta College of Arts, Science and Technology
MCST	Malta Council for Science and Technology
R&I	Research and Innovation
EU	European Union
MS	Member State(s)
CC BY	Creative Commons licences
DOAJ	Directory of Open Access Journals
OAR@UM	Open Access Institutional Repository of the University of Malta
EQF	European Qualifications Framework

INTRODUCTION

In order to support countries in their efforts to reform their national research and innovation system, the Directorate-General for Research and Innovation set up a Policy Support Facility (PSF) under Horizon 2020, aimed at “improving the design, implementation and evaluation of R&I policies”. The PSF provides best practice, leading expertise and guidance to Member States and Associated Countries on a voluntary basis, through a broad range of services to address their specific needs.

One of the services provided by the Horizon 2020 PSF is “specific support” to countries, providing concrete operational recommendations on how to tackle R&I policy issues or reforms.

The Maltese authorities expressed their interest in receiving such specific support to provide them with external advice and operational recommendations in developing a tailor-made Open Access (OA) policy both in relation to access to publications and access to data. In particular, the PSF specific support helps Malta to determine the right path for a smooth transition to an Open Access environment, by providing guidance on:

- Defining the vision, goals and scope of the National Open Access policy; and
- Clarifying the requirements for implementation of the OA policy, including the setting up of the required infrastructure and resources, and the means for supporting and ensuring timely compliance.

This report summarises the relevant background on Open Access in Malta. It complements a recent background report and expert report about the Maltese research and innovation system.¹

This report provides the experts engaged in this specific support activity with relevant background information on the subject.

¹ European Commission, DG RTD. 2019. Peer Review of the Maltese R&I System: Background Report (available online)

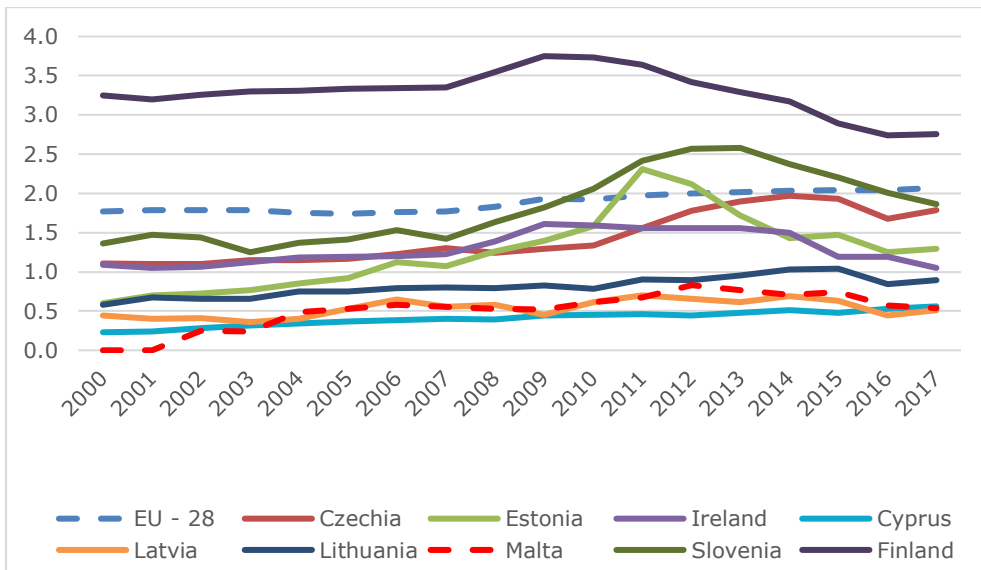
1 THE MALTESE RESEARCH LANDSCAPE

This chapter focuses on the current state of play in terms of the Maltese research landscape, looking at the research and development (R&D) spending, higher education landscape and scientific publications.

1.1 R&D spending

Malta has a population of 475,700 and GDP in 2017 of €11,108.6 million. According to Eurostat, its total R&D spending amounted to 0.54 % of GDP in 2017, making it one of the lowest R&I investing countries in the EU. It was also significantly below the EU average of 2.13 %.

Figure 1: R&D intensity, EU-average and selected EU-MS



Source: Eurostat

According to the National Statistics Office of Malta, the business sector contributed 65.3 % to total R&D in 2017, while the higher education and government sectors contributed 33.8 % and 0.9 % respectively. The R&D spending is primarily dedicated to basic research (52.1 % of total R&D in 2017), followed by applied research (32.6 %) and experimental development (15.3 %).

2 HIGHER EDUCATION IN MALTA

In Malta, the **University of Malta** (UM) is the only state-funded university offering doctoral and post-doctoral research positions, and is the most prominent research performer in the higher education sector. The UM has 14 faculties, 18 interdisciplinary institutes (which are not within these faculties but support teaching/research in thematic areas), 13 centres and 3 schools. There are currently 11,500 students including 1,000 international students and 450 visiting overseas students. Full-time undergraduate courses are free-of-charge to Maltese and EU citizens.

In Malta, the public tertiary education sector, apart from the UM, is complemented by the Malta College of Arts, Science and Technology (MCAST), which provides vocational programmes at EQF levels (1-4), and professional higher education programmes at EQF levels (5-7), as well as the Institute of Tourism Studies which offers programmes ranging from undergraduate to Masters, at EQF levels (1-7).

There are also various private and foreign universities represented in Malta – such as the American University of Malta, Barts and the London School of Medicine and Dentistry, European Graduate School, and Middlesex University Malta – which mainly offer post-graduate courses. In addition to these universities, there are around 40 Higher Education Institutions and 48 Further and Higher Education providers which are licenced and regulated by the National Commission for Further and Higher Education (NCFHE). A full list of these licenced providers is periodically updated on the NCFHE website².

Malta does not have a dedicated national funding body for scientific publications. According to Scopus, the main credited funding sponsor for Maltese publications is the European Commission, followed by the Malta Council for Science and Technology (MCST).

The MCST is a public body acting for and on behalf of the Foundation for Science and Technology. It was established in 1988 with the mandate of advising government on science and technology policy, and falls under the Parliamentary Secretariat for Financial Services, Digital Economy and Innovation. The Council's remit extended over the years from R&I policy advice to implementation, launching its first R&I strategy in 2003. The MCST works to bring together different entities involved in R&I to ensure open dialogue and promote information exchange and cooperation.

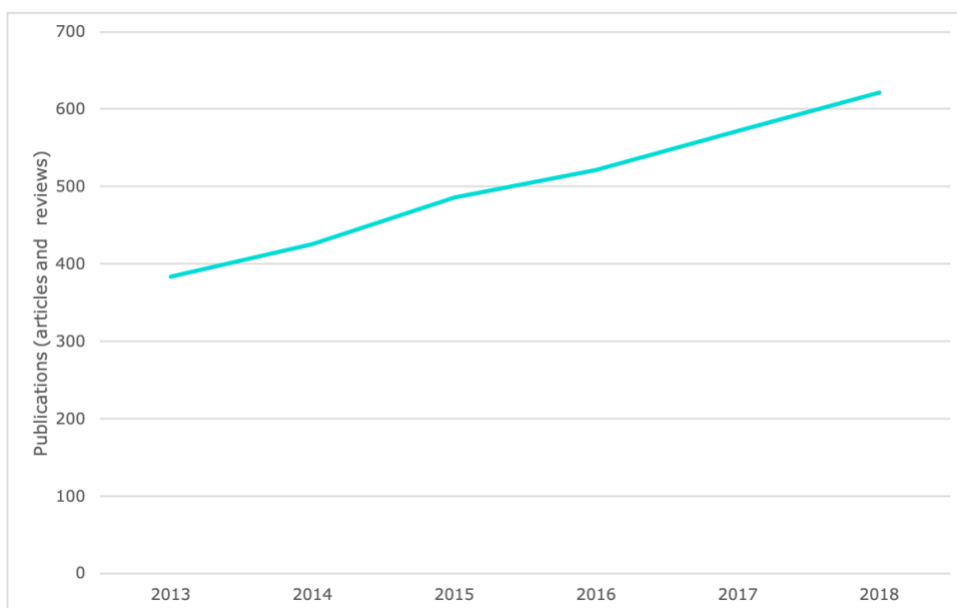
The MCST is an important actor as it advises the government on science and technology policy and manages the national R&I funding programme. It is now also responsible, among others, for designing a national Open Access policy.

² <https://ncfhe.gov.mt/en/register/Pages/register.aspx>

3 SCIENTIFIC OUTPUTS: PUBLICATIONS

This section draws on information contained in the Scopus database. Peer reviewed journal articles and reviews with a Maltese affiliation were analysed for the period 2013-2018. In the figure below, Maltese authors are recognised as persons affiliated with Maltese institutions. In total, 620 publications can be identified during the period stipulated.

Figure 2: Number of publications with a Maltese author (2013-2018)



Source: Data – Scopus, Calculation – Technopolis Group

The majority of the publications (articles, reviews) originated from the University of Malta, followed by its medical branch, the Mater Dei Hospital. A significant proportion (26.4 %) of the publications were in medical journals, followed by the social sciences (10.6 %). The journals where Maltese authors mostly publish were the following:

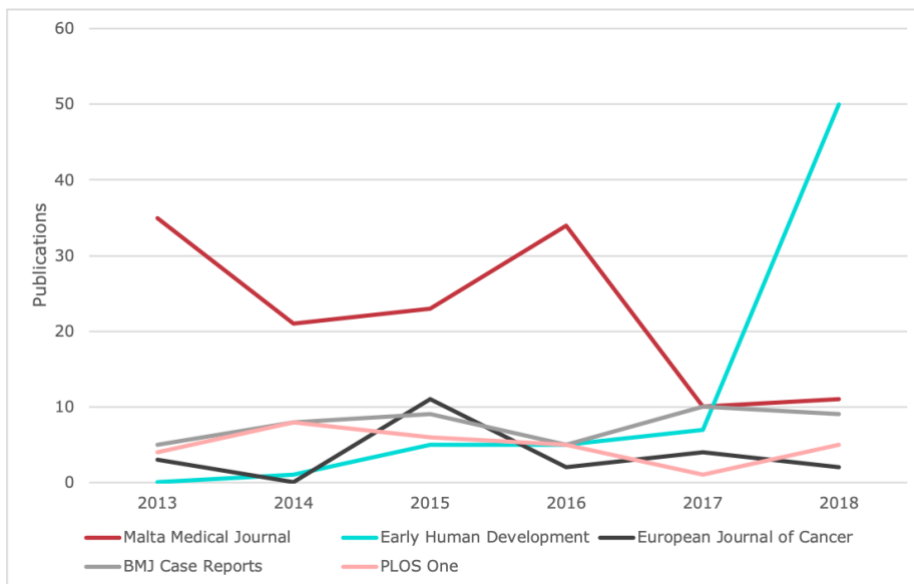
- *Malta Medical Journal* (University of Malta)
- *Early Human Development* (Elsevier)
- *European Journal of Cancer* (Elsevier)
- *BMJ Case Reports* (BMJ)
- *PLOS One*

The *Malta Medical Journal* is published by the University of Malta Medical School. This journal is an OA publication as all issues can be downloaded from UM’s own repository – OAR@UM.³

The figure below shows the number of publications by Maltese authors in these five journals. Malta’s research activity is focused on the medical sciences, which is evidence of a degree of specialisation.

The MCAST publishes a research journal which provides free, unrestricted access to research results through the ‘Applied Research’ icon on its website. In addition, MCAST’s early researchers publish in a wide range of external OA journals.

Figure 3: Publications in five journals where Maltese authors publish most (2013-2018)



Source: Data – Scopus, Calculation – Technopolis Group

The spike for the *Early Human Development* journal in 2017-2018 is explained by a series of around 50 short papers (2-4 pages long) published separately on WASP.

³ <https://www.um.edu.mt/library/oar/handle/123456789/148>

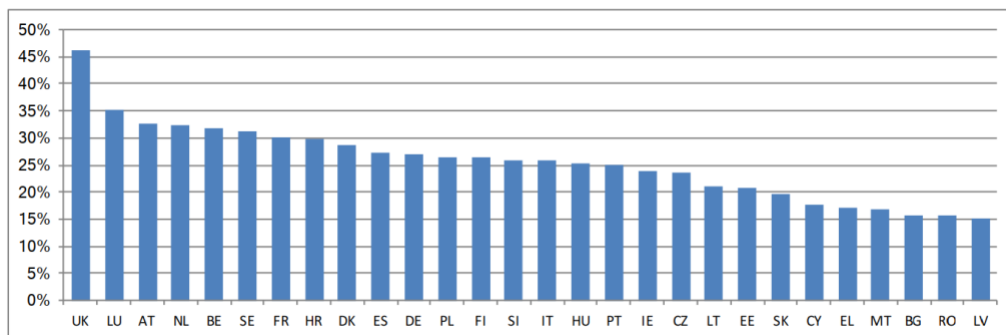
4 OPEN ACCESS IN MALTA

This chapter looks more closely at Malta’s Open Access activity (its share and use) and the University of Malta’s OA policy. The data comes from the MoRRI project, with the Web of Science (WoS) as the data source.

4.1 Malta’s share of Open access

The figure below shows the share of Open Access publishing across the EU-28 Member States in 2016. Malta’s share of 17 % was thus below the EU-average of 20 %. There were a total of seven EU-MS with OA shares below the 20 % mark.

Figure 4: Shares of OA publishing in 2016 (EU Member States)

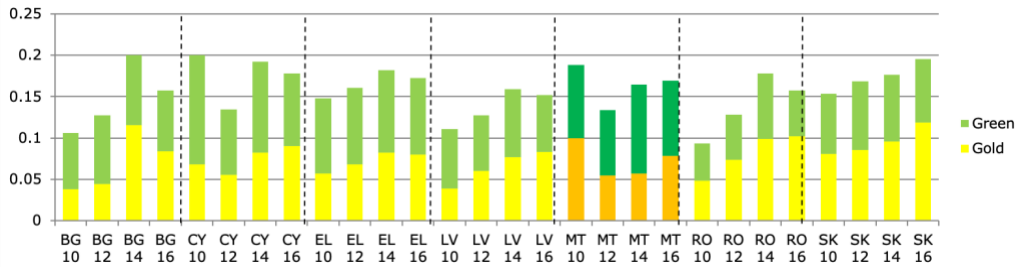


Source: MoRRI, 2017; Data: WoS, Calculation: CWTS

The figure below shows the evolution of Green and Gold OA₄ publishing among the seven EU-MS where OA publishing was below 20 %. Gold OA has generally increased among these countries during the period studied; Malta saw a dip between 2010 and 2012 with a mild recovery thereafter. Its share of Green OA showed similar movements but remained more stable.

⁴ Gold Open Access is where an author publishes their article in an online OA journal first. Green OA is when the author publishes an article in any journal and then self-archives a copy in a freely accessible institutional or specialist online archive, known as a repository, or on a website.

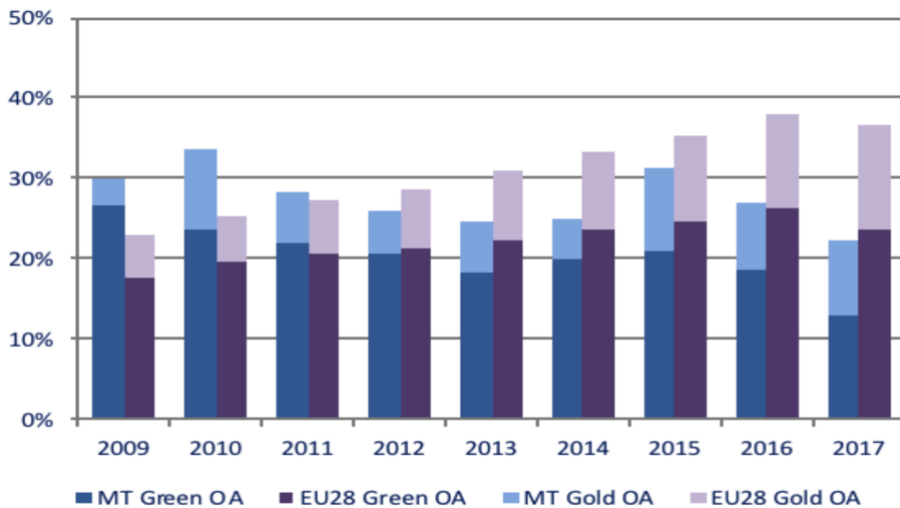
Figure 5: Share of OA publishing in countries where it is less than 20 % (2010-2016)



Source: MoRRI, 2017; Data: WoS, Calculation: CWTS

As Figure 6 shows, in 2009 and 2010, Malta’s share of OA output was higher than the EU-28. However, since 2012 the EU-28 has overtaken it. Malta’s OA share has fluctuated with an overall decline. Green OA performed better than Gold OA throughout the period. While there was an increase in Gold OA between 2009-2017, the overall OA share for Malta went down – mainly due to lower Green OA results.

Figure 6: Open Access publications and outputs (2009-2017)



Source: Peer Review of the Maltese R&I System Background Report, 2019, Data: WoS, Calculation: CWTS

The following table provides an overview of Maltese Open Access publications where the articles can be found.

Table 1: Overview of Maltese publications in Open Access journals

Journals	Description	Source
<i>Plos One</i>	PLOS One is a peer-reviewed OA scientific journal published by the Public Library of Science (PLOS) since 2006. PLOS One is financed by charging authors a publication fee. The “author-pays” model allows PLOS journals to provide all articles to everybody for free (i.e. Open Access) immediately after publication. It applies the CC BY licence. Under this licence, authors agree to make articles legally available for reuse, without permission or fees, for virtually any purpose.	https://publons.com/journal/70/plos-one
<i>Eurosurveillance</i>	The entire content is Open Access, free of charge for both readers and authors. Eurosurveillance is listed in the Directory of Open Access Journals (DOAJ) as Green OA.	https://www.eurosurveillance.org/about
<i>Scientific Reports</i>	Scientific Reports is an Open Access journal. Articles in the journal are free to access, download, share, and re-use. Scientific Reports articles are published OA under a CC BY licence.	https://www.nature.com/srep/about/open-access
<i>Mediterranean Marine Science</i>	This is an Open Access journal indexed in DOAJ. The Mediterranean Marine Science journal provides immediate open access to its content on the principle that making research freely available to the public contributes to global knowledge exchange.	http://www.epset.gr/en/Press-Center/News/mediterranean-marine-science-online

5 OPEN ACCESS IN MALTA – PUBLICATIONS PERSPECTIVE

In this chapter Open Access strategy is explored from the publications perspective. Open Access policy was featured in the Electoral Manifesto⁵ of the Maltese Political Party in 2017. So far, Malta does not have a national Open Access policy but announced plans to conclude one by 2020.

5.1 *The University of Malta Library*

To support Open Access, in 2014, the UM Library implemented the first institutional repository (OAR@UM) on the Maltese Islands. It is an online platform that collects, preserves and disseminates via Open Access a variety of scholarly research, generated by UM academics and researchers. The repository enhances the visibility of research being carried out under the auspices of the UM.

The research material uploaded on OAR@UM includes:

- Monographs;
- Scholarly peer-reviewed journal articles;
- Electronic theses and dissertations (ETDs);
- Conference proceedings;
- Audio visuals materials.

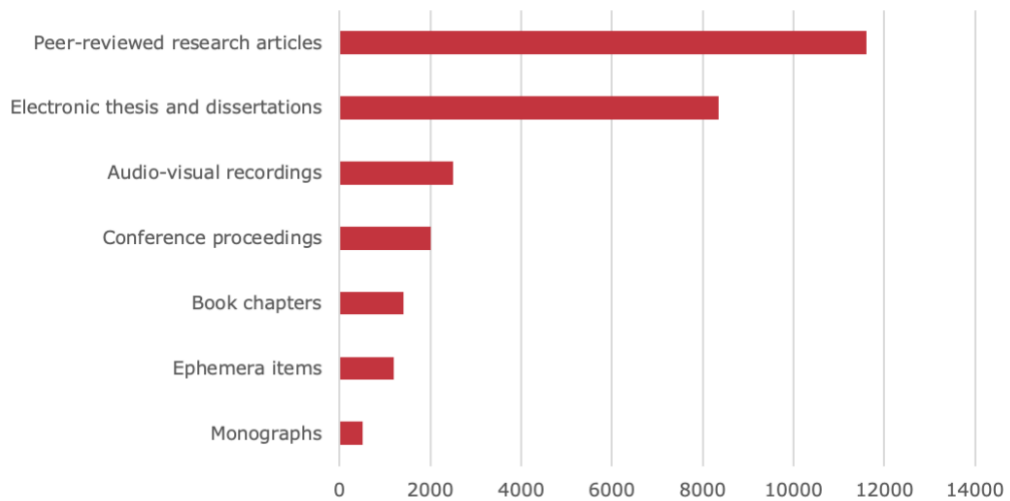
Electronic theses and dissertations are uploaded on OAR@UM but not necessarily Open Access. Only PhD theses and Masters dissertations receiving a distinction (i.e. Grade A) are published OA. All other ETDs are accessible through a UM-registered account. A 'Request a Copy' button on OAR@UM site allows non-UM users to request an electronic copy of ETDs directly from the author.

Academics, support staff and students can deposit research content on OAR@UM, while all content made available in Open Access can be accessed through the internet without authentication.

In December 2018, around **31,500 items** had been uploaded on OAR@UM. These items include the following:

⁵ This was mentioned in the PowerPoint presentation by the Maltese authorities during the kick-off meeting for this PSF Specific Support measure.

Figure 7: Total items uploaded on OAR@UM (by the end of 2018)



Source: Data – OpenAire

Currently, there are **73 full-text Maltese journals** made available in Open Access on OAR@UM, including the *Malta Medical Journal*. The list can be found on the UM website.⁶

All content deposited on OAR@UM can be retrieved and is easily harvested by indexing services and search engines such as Google and Google Scholar. The OAR@UM has also been registered with several prominent Open Archive Initiative (OAI) service providers including OpenAIRE, COnnecting REpositories (CORE) and Bielefeld Academic Search Engine (BASE).

Owing to the fact that OAR@UM is the sole repository in Malta, it also serves as an unofficial national repository. To this effect, national intellectual output and cultural heritage is also accepted on OAR@UM and disseminated in Open Access.

Moreover, in 2017, the UM Library established a dedicated Open Science Department providing advice on Open Access and supporting researchers and academics with the uploading of their research output on OAR@UM.

In addition to the UM Library, there are also the National Archives and the National Public Libraries Department in Malta, which currently do not have digital repositories.

⁶ <https://www.um.edu.mt/library/openscience/maltesejourals>

5.2 University of Malta Open Access policy

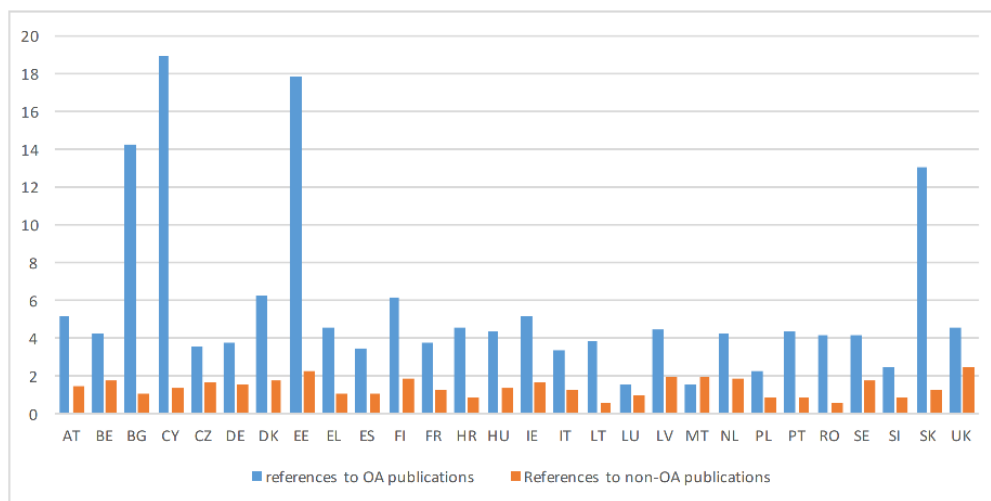
In 2017, the UM implemented an Open Access policy which **recommends** that academics and researchers upload their research papers onto OAR@UM in Open Access.

The UM Open Access policy encourages authors to take the Green OA path, but supports Gold OA publishing when funds for 'Article Processing Charges' are available. While authors are free to publish in journals of their own choice, the OAR@UM gives researchers an Open Access option for peer-reviewed publications. University of Malta researchers are encouraged to deposit a copy of all peer-reviewed publications on the repository as soon as possible upon completion. In circumstances when a copy of the research paper cannot be made available in OA (i.e. because of restrictions imposed by publishers), researchers are encouraged to upload a copy on OAR@UM under restricted access.

5.3 Open Access use

Figure 8 shows the share of use of non-OA scientific articles and OA articles in Wikipedia. Since Wikipedia entries are consulted by the general public (not only researchers), it indicates a direct, wider benefit.

Figure 8: Shares of OA and non-OA publications in Wikipedia, 2012-2015



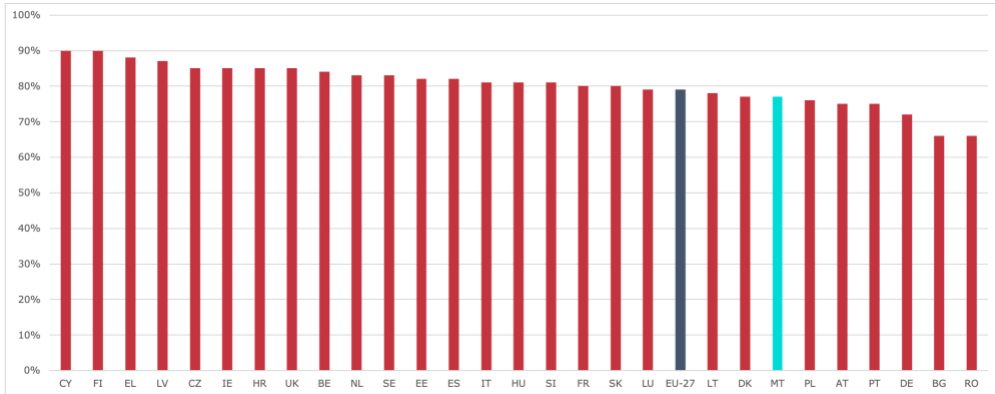
Source: Data – MoRRI, 2017 Data basis: altmetric.com, Calculation: CWTS

The overall trend during the period studied indicates that Open Access articles were more frequently cited in Wikipedia entries than the non-OA articles. For Malta, the shares for both OA and non-OA publications were among the lowest, and it was the only EU-MS with a lower share of OA references compared to non-OA.

A Eurobarometer survey of 2013, which addressed the public perception of Open Access, provides insights concerning the share of people who think that publicly funded research should be made available. Within Europe, the spread between

almost fully agreeing to the statement (90 % in Cyprus and Finland) and the least favourable ones (66 % in both Bulgaria and Romania) was quite high at more than 24 percentage points. The Maltese result of 78 % was slightly below the EU-27 average of 79 %.

Figure 9: Public perception of Open Access, 2013



Source: MoRRI, 2017, Data: Eurobarometer 401

BIBLIOGRAPHY

European Commission DG RTD. 2016. Specific Support to Malta. Monitoring the Maltese National Research and Innovation Strategy. Luxembourg: Publications Office of the European Union

European Commission DG RTD. 2018. The evolution of Responsible Research and Innovation in Europe: The MoRRI indicators report. Luxembourg: Publications Office of the European Union

European Commission DG RTD. 2019. Peer Review of the Maltese R&I System Background Report 2018. Luxembourg: Publications Office of the European Union

European Commission. 2014. ERAWATCH Country Reports 2013: Malta. Luxembourg: Publications Office of the European Union

European Commission. 2017. RIO Country Report 2016: Malta. Luxembourg: Publications Office of the European Union

European Commission. 2018. Monitoring the Evolution and Benefits of Responsible Research and Innovation (MoRRI). Luxembourg: Publications Office of the European Union

European Innovation Scoreboard. 2019. Source: https://ec.europa.eu/growth/industry/innovation/facts-figures/scoreboards_en

European Union. 2018. EC Education and Training Monitor 2018 Malta. Luxembourg: Publications Office of the European Union. Source: https://ec.europa.eu/education/sites/education/files/document-library-docs/et-monitor-report-2018-malta_en.pdf

Independent. 2019. R&D expenditure totals €7.2m, less than 1% of GDP – NSO. Source: <https://www.independent.com.mt/articles/2019-07-18/local-news/R-D-expenditure-totals-7-2m-less-than-1-of-GDP-NSO-6736211067>

MCST. 2018. Malta's R&I Context and the Rationale and Expected Outcomes of the PSF Exercise

National Statistics Office. 2018. Research and Development in Malta: 2014-2016. Source: https://nso.gov.mt/en/News_Releases/View_by_Unit/Unit_A2/Public_Finance/Documents/2018/News2018_108.pdf

Open Access Policy of University of Malta. 2017. Source: https://www.um.edu.mt/__data/assets/pdf_file/0005/334454/OpenAccessPolicy.pdf

Zamilleri Vella, J. 2019. Maltese Journal Collection in OAR@UM. Source: <https://www.openaire.eu/blogs/maltese-journal-collection-in-oar-um>

Getting in touch with the EU

IN PERSON

All over the European Union there are hundreds of Europe Direct Information Centres. You can find the address of the centre nearest you at: <http://europa.eu/contact>

ON THE PHONE OR BY E-MAIL

Europe Direct is a service that answers your questions about the European Union. You can contact this service

- by freephone: 00 800 6 7 8 9 10 11 (certain operators may charge for these calls),
- at the following standard number: +32 22999696 or
- by electronic mail via: <http://europa.eu/contact>

Finding information about the EU

ONLINE

Information about the European Union in all the official languages of the EU is available on the Europa website at: <http://europa.eu>

EU PUBLICATIONS

You can download or order free and priced EU publications from EU Bookshop at: <http://bookshop.europa.eu>. Multiple copies of free publications may be obtained by contacting Europe Direct or your local information centre (see <http://europa.eu/contact>)

EU LAW AND RELATED DOCUMENTS

For access to legal information from the EU, including all EU law since 1951 in all the official language versions, go to EUR-Lex at: <http://eur-lex.europa.eu>

OPEN DATA FROM THE EU

The EU Open Data Portal (<http://data.europa.eu/euodp/en/data>) provides access to datasets from the EU. Data can be downloaded and reused for free, both for commercial and non-commercial purposes.

The Horizon 2020 Policy Support Facility (PSF) has been set up by the Directorate-General for Research & Innovation (DG RTD) of the European Commission under the EU Framework Programme for Research & Innovation 'Horizon 2020'. It supports Member States and countries associated to Horizon 2020 in reforming their national science, technology and innovation systems.

The objective of this Specific Support is to develop recommendations serving as a basis for a tailor-made Open Access policy in relation to access to publications and data, including setting up a required infrastructure.

This background report synthesizes evidence about Malta's Open Access situation and complements it with latest data from Eurostat and MoRRI report. It facilitates the work conducted by a panel of independent experts in 2019 and 2020.

Studies and reports