

■ THE FWF'S OPEN ACCESS POLICY OVER THE LAST 15 YEARS – DEVELOPMENTS AND OUTLOOK

by Katharina Rieck

Abstract: The report outlines the developments of the open access (OA) policy of the Austrian Science Fund (FWF) since its first release in 2004. Over the last 15 years, the FWF has not only continuously updated its OA policy but has also adapted its support mechanisms to include dedicated funding programmes and financial support structures for alternative publication venues and infrastructures. A brief analysis of the FWF's open access funding will be provided in the second part of the article, which will conclude with an outlook of the upcoming revisions to the OA policy.

Keywords: Open Access; Open Data; Open Science; Scholarly Communication; Research funding; Austria

DIE OPEN ACCESS POLICY DES FWF ÜBER DIE LETZTEN 15 JAHRE – ENTWICKLUNGEN UND AUSBLICK

Zusammenfassung: Der Bericht skizziert die Entwicklungen der Open-Access (OA) Policy des österreichischen Wissenschaftsfonds (FWF) seit der ersten Veröffentlichung im Jahr 2004. Der FWF hat seine Policy in den letzten 15 Jahren nicht nur kontinuierlich überarbeitet, sondern auch seine Fördermechanismen wie spezielle Förderprogramme und finanzielle Unterstützungsstrukturen für alternative Publikationsformate und Infrastrukturen angepasst. Im zweiten Teil des Berichts wird eine kurze Analyse der FWF-Finanzierung von Open Access vorgenommen und ein Ausblick auf anstehende Anpassungen der OA Policy gegeben.

Schlagwörter: Open Access; Open Data; Open Science; Scholarly Communication; Wissenschaftsförderung; Österreich

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1. Introduction

For the past 15 years, the Austrian Science Fund (FWF) has actively supported Open Access (OA) to the outputs of publicly-funded research projects in Austria. The FWF is committed to ensuring that research outcomes are not locked behind paywalls but freely accessible for everyone on the internet. As one of the first funding organisations worldwide that introduced an OA mandate for publications, the FWF can say today that almost all publications resulting from its funded grants are openly available and free to read for everyone online. This high percentage of OA is the result of the FWF's continuing OA policy developments and support of OA initiatives over the past years.

As a member of cOAlition S¹, the FWF will publish a revised version of its current OA policy to publications in the near future which will then be consistent with Plan S. These preparations have prompted the Austrian Science Fund (FWF) to reflect on the developments of its OA policy and on supporting activities in the field of open scholarship over the last 15 years.

2. FWF's OA policy developments

In 2003, the Austrian Science Fund (FWF) was one of the first signatories of the *Berlin Declaration on Open Access to Knowledge in the Sciences and Huma-*

nities², which is today regarded as being one of the founding documents of the international OA movement. One year later, the FWF released its first OA policy in 2004 and has since updated the original version of the policy three times.

The first version of the FWF's OA policy was a strong recommendation for OA to FWF-funded project outputs and not a mandate. FWF-funded researchers were strongly encouraged to make their publications OA and thanks to the Peer-reviewed Publications programme were able to receive additional financial support to do so (for financial support structures, see section 4).

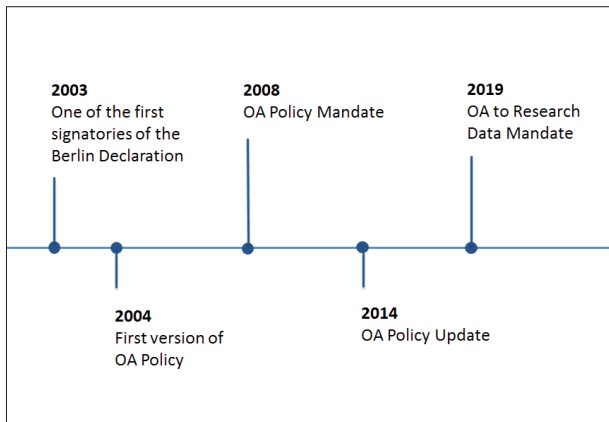


Fig. 1: FWF's Open Access policy developments

In accordance with the Berlin Declaration, which makes clear that “(o)pen access contributions include original scientific research results, raw data and metadata, source materials, digital representations of pictorial and graphical materials and scholarly multimedia material,”³ the FWF's OA policy has included a dedicated section on research data since 2004. Research data and similar materials that resulted from FWF grants were strongly recommended to be made openly accessible.

In 2008, OA became a requirement for all peer-reviewed publications⁴ resulting from FWF projects. The second version of the policy⁵ comprised two strategies for making research publications openly available: immediate OA in a journal – either in an OA journal (Gold OA) or in a hybrid OA journal – or OA via self-archiving of the author's accepted manuscript in a discipline-specific or institutional repository no longer than six to 12 months after publication (Green OA). Regardless of the

publication venue, publications had to be archived in a registered repository. The policy also included a dedicated section on research data, which at this point continued to be a strong recommendation. OA to research data was encouraged whenever legally and ethically possible by depositing the data in a way that made it citeable and re-useable without restrictions for others.

This policy version was in place from 2008 until the end of 2014. One year after the FWF signed the DORA declaration in 2013⁶, an updated version – the third policy version – of the FWF’s OA policy went into effect for all publications resulting from projects that were granted FWF funding after November 2014. The policy included sections that specified the different OA publishing options. Gold OA journals have since then been required to be listed in the Directory of OA Journals (DOAJ) and hybrid OA journals in the Web of Science or Scopus. In any case, publications must be made available using the Creative Commons Attribution CC-BY licence. Together with the policy update, the guidelines for the financial support of OA publications as part of the Peer-reviewed Publications programme were adopted (see below). Green OA continued to be an option and since then can be ensured by self-deposition of the author’s accepted manuscript in a registered discipline-specific or institutional repository no longer than 12 months after publication. OA to research data continued to be a strong recommendation but was not a mandate at this time. In 2015, the EU funded PASTEUR4OA project⁷ published a funder case study highlighting the FWF’s policy developments and declaring it one of the most effective ones worldwide.⁸

The most recent OA policy update took place at the beginning of 2019 when OA to research data became a mandate for research data underlying publications. As of 2019, the FWF’s open access policy is comprised of two parts: OA to Peer-reviewed Publications⁹ and OA to Research Data.¹⁰ Based on the experiences gained as part of the FWF’s Open Research Data pilot programme¹¹ and the exchange via the Science Europe working group on research data¹² on an international level and via the e-infrastructures plus project¹³ on a national level, the FWF has updated its OA policy on research data. As of 1 January 2019, the FWF requires OA to research data that underlie scholarly publications whenever it is legally, ethically, and technically possible to ensure the reproducibility and reuse of research outcomes resulting from FWF-funded projects. Furthermore, the FWF asks all grantees to submit a research data management plan.¹⁴

3. OA initiatives and collaborations

The FWF's policy developments have been supported by various initiatives such as the journal funding pilot programme in 2013, which provided funding for eight high-quality OA journals in the social sciences and humanities.¹⁵ The evaluation of the programme provided valuable insights into the technical and structural challenges media owners have to face when flipping a journal to OA or publishing a new OA journal.

Furthermore, in 2012, the FWF, together with Universities Austria (uniko), founded the Open Access Network Austria (OANA), which is now known as Open Science Network Austria.¹⁶ OANA is a think tank that aims to bring together national stakeholders to discuss issues regarding Open Science in Austria. The network published for example the "Recommendations for the Transition to OA in Austria"¹⁷ in 2015, which describes 16 steps that have to be undertaken to ensure 100% OA in Austria by 2025, and the "Vienna Principles – A Vision for Scholarly Communication."¹⁸ Currently, OANA is, among other things, working on recommendations for an Open Science strategy for Austria.¹⁹

During the last few years, the FWF has also supported various national and international Open Science initiatives and is for example a signatory of the OA2020 Expression of Interest²⁰, the EOSC declaration²¹, and the ORCID open letter of funders²².

4. FWF's OA funding

Since 1968, the founding year of the Austrian Science Fund, the FWF has provided financial support for publication costs.²³ Until 2004, the FWF's „Druckkosten“ (*printing costs*) support was mainly used to subsidise printing costs for monographs or edited volumes from the Social Sciences and Humanities. From 1968 to 2004, the costs continuously rose and amounted to an average of EUR 15,000.– per book. Those costs were charged even though there was usually no copy-editing service provided by the publishers, and the international peer review was organised by the FWF. Therefore, in 2005, the FWF capped its grants for stand-alone publications to EUR 8,000.– in book processing charges (BPCs). Only in exceptional cases was granted a higher funding (up to EUR 15,000.–).

In 2009, the support for book publications was renamed to "Stand-Alone Publications programme"²⁴ and the cap was lifted on the condition that the publishers would offer other services in addition to printing, such

as translations and OA. Even though the FWF did not have a mandate for OA to book publications in place in 2009, two-thirds of the books were already published OA between 2009 and 2012. From 2012 onward, OA to stand-alone publications with a Creative Commons licence (CC BY, CC-BY-NC, CC-BY-ND, CC-BY-NC-ND) and archiving of monographs in the FWF's E-Book Library were mandatory. Since 2014, the costs spent as part of the Stand-Alone Publications programme have been published online²⁵, and books must be published under the CC BY or CC BY-NC licence. From 2014–2018, the BPCs continuously decreased so that at present, the average BPC is around EUR 13,000.– per book but includes far more services for authors than when the programme initially started.

Year of FWF Payment	BPCs in EUR	No. of Publications	Average BPC in EUR
2014	957,139.68	62	15,437.74
2015	689,737.00	48	14,369.52
2016	547,688.60	37	14,802.39
2017	611,719.32	44	13,902.71
2018	505,767.28	39	12,968.39
Total	3,312,051.88	230	14,400.26

Tab. 1: FWF costs spent as part of the Stand-Alone Publications programme 2014–2018

In 2016, the programme was extended to the funding of innovative publication formats such as annotated scholarly databases, web-based publications, etc. Currently, the publications funded as part of the programme must be published under the CC BY or CC-BY-NC licence (a mandate for the CC BY licence was in place from 2015 to the end of 2018). For publications with the more restrictive licence CC BY-NC, the FWF will, however, provide less funding than for publications with a CC BY licence.

Today, around 726²⁶ funded stand-alone publications are openly-accessible via and archived in the FWF's E-Book Library²⁷ as well as indexed in the OAPEN Library²⁸ and the Directory of Open Access Books (DOAB)²⁹. The impact of the FWF's E-Book Library Collection in the OAPEN Library was analysed in 2015.³⁰ The results showed that the books reach readers far beyond Austria and the German-speaking community. Hence, the value of supporting OA to books by FWF is evident.

From 2000 onward, the FWF not only financially supported book publications but also page, figure, and colour charges for articles in scho-

larly journals that resulted from FWF projects. Until 2004, the FWF spent around EUR 200,000.– per year on such subsidies, of which two-thirds resulted from publications in the Life Sciences and one-third from the Natural Sciences. Together with the OA policy release in 2004, the Peer-reviewed Publications programme³¹ was introduced to provide FWF-funded researchers with additional financial resources to cover the costs of OA articles and other publication costs up to three years after a grant ended. The results of the “Developing an Effective Market for Article Processing Charges” study³², which had been commissioned by the FWF together with the Wellcome Trust and other international organisations, led to an update of the publication funding scheme, which means that since November 2014, the FWF has only financially supported immediate OA publications with a CC BY licence. Costs such as page, colour, or figure charges are no longer subsidized. Furthermore, price caps for Gold OA (EUR 2,500.–) and Hybrid OA (EUR 1,500.–) have been introduced.

For the last six years (from 2013 onward), the FWF has monitored and published its publication cost expenditures from both programmes online on Zenodo.³³ The data from the Peer-reviewed Publications programme is additionally included in the Open APC dataset to allow for international cost monitoring.³⁴

In total, from 2013 to 2018³⁵, the FWF financially supported 8,211 article items³⁶ at a cost of EUR 16.9 m as part of the Peer-reviewed Publications programme.

Year of FWF Payment	Gold OA in EUR	Items	Hybrid OA in EUR	Items	Other Costs in EUR	Items	Total in EUR	Items
2013	284,515.64	202	2,087,664.65	918	272,991.25	246	2,645,171.54	1,366
2014	319,345.79	248	1,797,936.56	782	339,064.13	285	2,456,346.48	1,315
2015	418,408.05	288	2,376,355.58	912	273,653.57	215	3,068,417.20	1,415
2016	440,782.60	247	2,030,398.63	840	205,913.21	156	2,677,094.44	1,243
2017	704,560.97	354	1,898,729.94	790	127,602.05	103	2,730,892.96	1,247
2018	800,833.32	415	2,398,469.65	1,115	115,031.27	95	3,314,334.24	1,625
Total	2,968,446.37	1754	12,589,555.01	5357	1,334,255.48	1,100	16,892,256.86	8,211

Tab. 2: FWF costs spent as part of the Peer-reviewed Publications programme 2013–2018

The publishers with the highest shares during the last six years are three of the major commercial academic publishers: Elsevier, Springer Nature, and

Wiley-Blackwell. The first three alone account for 56% of all costs spent by the FWF as part of the Peer-reviewed Publications programme between the years 2013 and 2018.

Since 2014, the cost data has included information on the publication costs per discipline. The data from 2014 to 2018 shows that the Life Sciences hold the highest share with 57%, followed by the Natural Sciences with 37%, and that the Social Sciences and the Humanities only make up 6% of the overall costs.

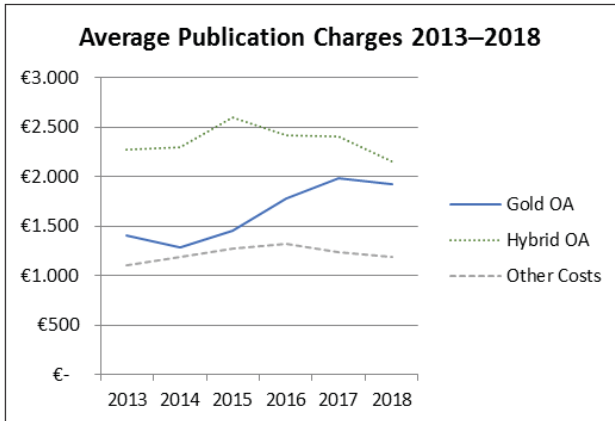


Fig. 2: Average publication charges 2013–2018

Year	Gold OA in EUR	Hybrid OA in EUR	Other Costs in EUR
2013	1,408.49	2,274.14	1,109.72
2014	1,287.68	2,299.15	1,189.70
2015	1,452.81	2,605.65	1,272.81
2016	1,784.54	2,417.14	1,319.96
2017	1,990.29	2,403.46	1,238.85
2018	1,929.72	2,151.09	1,186.28

Tab. 3: Average publication charges 2013–2018

Figure 2 and Table 3 show two trends: First, the increase of the average APC for Gold OA, for which the FWF had introduced a price cap of EUR 2,500.- in 2014. The average APC in this regard in 2018 was 37% higher than in the year 2013. The data of the Wellcome Trust³⁷ shows a similar

cost increase for Gold OA between 2015/2016 and 2017/2018 with average APCs of EUR 2,412.32.–³⁸/£ 2,090.– (or EUR 1,959.87.–/£ 1,698.– when excluding the higher priced OA journal APCs) in 2017/2018. In comparison to the data of FWF and Wellcome, the average APC for Gold OA on the Open APC³⁹ platform is lower, at EUR 1,558.–⁴⁰. The development of the Gold OA APCs needs to be further monitored in the upcoming years to be able to better understand the OA cost trends and to be able to react to the market developments.

The second trend that can be seen is the decrease of average Hybrid OA costs after 2015. The decline in costs can be explained by the price cap of EUR 1,500.–, which was introduced for publications resulting from projects which were granted after 1 November 2014, and the transformative agreements that are in place with some of the major publishers (for details, see below). The “price cap effect” was not visible in the data of the first years after the new policy was introduced but gained more influence on the cost developments from 2016 onward.

It is important to note that FWF-funded principal investigators can use other financial resources, such as institutional budgets or cost-sharing with co-authors, to cover the costs that exceed the FWF’s price cap. Where the additional money is coming from cannot be monitored by the FWF. The same applies for other costs, such as page, colour, or figure charges, which the FWF stopped funding with the 2014 policy update. To be able to monitor the total costs of OA articles, the FWF is working together with Austrian research institutions as part of the national project Austrian Transition to OA (AT2OA)⁴¹ and the international initiatives Efficiency and Standards for Article Charges (ESAC)⁴² and Open APC.

Since 2014, the FWF, together with the Austrian Academic Library Consortium (KEMÖ)⁴³, has negotiated transformative OA agreements (offsetting as well as read and publish agreements) with publishers. So far, transformative agreements have been reached with four of the six publishers for which the FWF has spent the most in recent years (with IOP Publishing, Taylor & Francis, Springer Nature, and Wiley). In 2018, the share of publication costs that the FWF spent as part of those four transformative arrangements amounted to EUR 0.98 m for 506 article items. Additionally, there are agreements with the Gold OA publishers Frontiers⁴⁴ and MDPI⁴⁵ in place that allow for discounted publishing and simpler workflows for FWF-funded authors. The texts of those agreements are openly available online.⁴⁶

Empirical evidence shows that already in 2013 50% of all research publications worldwide were published with only five publishers.⁴⁷ Hence, to foster a diverse OA publishing market, since 2014, the FWF has also been

supporting alternative publication models and infrastructures⁴⁸, such as SCOAP3, Europe PMC, arxiv, DOAJ, OAPEN, OLH, ORCID, and SciPost. The costs spent on these initiatives are published on the FWF's website on a yearly basis.⁴⁹

Based on the cost data for 2018, the FWF altogether spent EUR 3.94 m on publication costs as part of the Peer-reviewed Publications programme, the Stand-Alone Publications programme, and alternative publication venues and infrastructures. EUR 2.33 m was spent on APC payments to publishers or reimbursements to FWF grant holders, and EUR 0.98 m as part of transformative agreements. An additional EUR 0.50 m was spent on stand-alone publications. The support for alternative publication models and infrastructures amounted to EUR 0.13 m. In total, this amounts to about 1.7% of the FWF's annual budget.

5. Policy compliance

Since 2015, the FWF has been monitoring the publication output of FWF projects and the compliance with its OA policy. The FWF's OA compliance report for 2018 shows that 92% of all peer-reviewed publications resulting from FWF projects are OA, a rise of compliance in comparison to last year's 90% (2015: 83%, 2016: 92%). The data refers to peer-reviewed publications that arose from FWF grants and which are listed in the project's final reports.⁵⁰ The FWF data supports the results of a recent study that provides empirical evidence that *"(...) funders can clearly shape compliance through their mandates, and that this compliance needs to be monitored (...) when the proper structure and incentives are in place, researchers comply."*⁵¹

Despite the FWF's OA compliance rate of over 90% in the last years at the national level and studies estimating that almost 50% of all scholarly publications worldwide are already OA⁵², many international stakeholders claim that the uptake of OA since the release of the Berlin Declaration in 2003 has been too slow and therefore have been looking for ways to speed up the transition to an OA world.

6. Further developments and outlook

Probably the most prominent initiative in recent months to promote the flip to OA has been Plan S. The FWF is one of the initial members of cOAlition S⁵³, an international consortium of research funders that supports

Plan S⁵⁴, which was initiated in 2018 and aims for immediate OA to publications funded by its members. Long before Plan S was published on 4 September 2018, former FWF president Christoph Kratky had already advocated for a coordinated approach in 2013 and called it a key principle for OA:⁵⁵ *“Only through close cooperation, starting at a European level, can we develop and implement models to accelerate the transition to full OA.”* It would take five more years before such a coordinated action was initiated with cOAlition S in 2018.

In November 2018, the Plan S implementation guidance was published, which detailed the principles and received more than 600 international feedbacks.⁵⁶ Plan S has led to one of the most extensive international discussions concerning the current scholarly communication ecosystem and OA since the beginning of the OA movement. A revised version of the Plan S guidance document was published in May 2019.⁵⁷ This updated version will eventually have an impact on the FWF’s current OA policy and will lead to revisions of it in the next months. In addition to requiring changes to the OA policy, Plan S will also have an impact on the FWF’s funding of OA. Details will also be published in the upcoming months. However, the FWF, with its current OA policy and its close cooperation with Austrian research institutions and KEMÖ, is well prepared for Plan S. Plan S elements such as a requirement for a CC BY licence for publications, transformative agreements, support of alternative open access journals and platforms, coverage of publication costs, and monitoring of OA – costs and compliance – have been integral parts of the FWF’s OA policy since 2014.

The FWF’s 15 years of experience with its OA policy will help to implement an updated, Plan S-compliant OA policy on publications in the next months and any further revisions that may be necessary to the OA policy on research data in the future. Close collaboration with national and international partners, the monitoring of OA costs and OA compliance, as well as an openness for and support of new Open Science initiatives have proven to be key factors in successfully updating the respective policies in a rapidly changing environment like the scholarly communication landscape of the 21st century.

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- 4 The guidelines for stand-alone publications specify the OA conditions for book publications and differ timeline-wise from the ones for peer-reviewed scholarly articles.
- 5 The policy was posted on the FWF website, and the FWF also published an article about the new requirement in its information magazine: FWF (2008): Open Access Policy bei FWF-Projekten. FWF INFO. Das Informationsmagazin des Wissenschaftsfonds, 11–14. <https://www.fwf.ac.at/fileadmin/files/Dokumente/info-Magazin/info64-08-01.pdf>; The magazine is no longer published by the FWF and has been replaced by the online blog Scilog: <https://scilog.fwf.ac.at>
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