

GRANT ALLOCATION DISPARITIES
FROM A GENDER PERSPECTIVE

D 5.1. Synthesis report on contextual factors, gender equality policy analysis and gender bias risk analysis

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Abstract

The project GRANteD (Grant Allocation Disparities from a Gender Perspective) started in January 2019, funded within the European Commission Horizon 2020 programme, to analyse the occurrence and causes of gender bias in research funding in Europe. Six project partners in five countries investigate from different perspectives and with a multi-method approach factors that may cause gender imbalances before, during and after grant submissions. The project adopts a broad, process-oriented, perspective when investigating gender bias in grant allocation, paying particular attention to several different key organisational processes within Research Funding Organisations (RFOs), which structure and systematize grant allocation, such as decisions-making processes, review processes, and selection processes.

The GRANteD project includes five empirical, multi-level and multi-method, case studies in which gender bias and gender equality policies are studied in-depth, to produce a multi-faceted understanding of complex issues regarding gender disparities in higher education and science, drawing on both qualitative and quantitative approaches to data collection. The case study research design allowed for inclusion of five public RFOs in the European Research Area, situated in: Austria, Ireland, Poland, Slovak Republic, and Sweden, respectively. The countries and the core RFOs were selected to achieve not only a geographical spread but also a variety of research funding landscapes. In each of the five core RFOs, one funding instrument, targeting mainly early career researchers, was selected for a more detailed analysis of gender bias in the funding cycle.

This GRANteD report constitutes a synthesis on contextual factors, gender equality policy analysis and gender bias risk analysis. It explores, first, national funding regimes and national gender equality regimes as broader macro contexts of the five core RFOs. This contextual analysis includes how gender equality is or is not foregrounded in the research policies and legislation, as well as gender relations in the research sector. Second, gender equality policies and relevant regulations of the RFOs have been mapped and analysed through timelines, framings, topics addressed, and measures. A grid for assessing gender bias risk in RFOs is introduced in the report as an innovative tool to map potential gender bias risk areas in RFOs, focusing on seven key areas: Strategy; Structure; Language and Communication; Evaluation; Transparency; Accountability; and Monitoring. Third, the five selected funding instruments included in the study are here analysed, adopting a similar framework for identifying potential gender bias risks.

Keywords: Gender equality policy; gender equality measures; gender bias risk; research funding organisations.



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CONTENTS

1	INTRODUCTION	9
1.1	Background	9
1.2	GRANteD	13
1.2.1	Aim, purpose, and objectives of GRANteD	13
1.2.2	Research questions of GRANteD	13
1.2.3	The structure of the GRANteD project	14
1.2.4	The GRANteD approach to gender bias in grant allocation	14
1.3	Work Package 5: Formal policies related to grant allocation	15
1.3.1	Objectives of WP5	16
1.3.2	Tasks of WP5	16
1.4	Aim and purpose of report	17
1.5	Methodology, method, and empirical material	18
1.5.1	Qualitative textual analysis	18
1.5.2	Methodological frame and data used	19
1.5.3	Multilevel policy analysis	23
2	CONTEXTUAL FACTORS: NATIONAL FUNDING REGIMES	26
2.1	Background: National funding regimes	26
2.1.1	Research intensity	27
2.1.2	National research policy goals	29
2.2	National gender equality framework	30
2.2.1	Austria	30
2.2.2	Ireland	31
2.2.3	Sweden	32
2.2.4	Poland	33
2.2.5	Slovak Republic	34
2.3	Gender equality in research and innovation	36
2.3.1	Austria	37
2.3.2	Ireland	39
2.3.3	Sweden	40
2.3.4	Poland	41



2.3.5	Slovak Republic.....	42
2.4	Gender balance in research.....	42
2.5	Core RFOs' overall frameworks	44
2.5.1	Austrian Science Fund (FWF).....	45
2.5.2	Science Foundation Ireland (SFI)	46
2.5.3	Swedish Research Council (SRC).....	47
2.5.4	Polish National Science Centre (NCN)	49
2.5.5	Slovak Research and Development Agency (SRDA)	50
3	GENDER EQUALITY POLICY ANALYSIS OF CORE RFOS	52
3.1	Gender Equality Policy analysis framework	52
3.2	FWF	54
3.2.1	Timeline	54
3.2.2	Framing of gender equality	55
3.2.3	Goals and aims of the gender equality policy	56
3.2.4	Topics addressed by the gender equality policy	57
3.2.5	Gender equality measures in place.....	57
3.2.6	Other potentially relevant measures and policies	58
3.2.7	Summary	60
3.3	SFI.....	61
3.3.1	Timeline	61
3.3.2	Framing of gender equality policy.....	62
3.3.3	Goals and aims of the gender equality policy	63
3.3.4	Topics addressed by the gender equality policy	65
3.3.5	Gender equality measures in place.....	65
3.3.6	Other potentially relevant measures and policies	69
3.3.7	Summary	71
3.4	SRC	72
3.4.1	Timeline	72
3.4.2	Framing of gender equality	73
3.4.3	Goals and aims of the strategy.....	73
3.4.4	Topics addressed by the gender equality policy	74



3.4.5	Gender equality measures in place.....	75
3.4.6	Other potentially relevant measures and policies	77
3.4.7	Summary	78
3.5	NCN.....	79
3.5.1	Timeline	79
3.5.2	Framing of gender equality	79
3.5.3	Goals and aims of the gender equality policy	79
3.5.4	Topics addressed by the gender equality policy	80
3.5.5	Gender equality measures in place.....	80
3.5.6	Other potentially relevant measures	81
3.5.7	Summary	83
3.6	SRDA	85
3.6.1	Timeline, framework, goals and aims of GE policy	85
3.6.2	Topics addressed by the gender equality policy and gender equality measures in place	85
3.6.3	Summary	85
4	OVERALL GENDER BIAS RISK ANALYSIS IN CORE RFOS	86
4.1	Bias and impartiality	86
4.2	Gender bias – a broader organisational perspective	87
4.3	Gender bias risk analysis framework.....	88
4.3.1	Strategy	90
4.3.2	Structure.....	90
4.3.3	Communication and language.....	90
4.3.4	Criteria and eligibility	90
4.3.5	Transparency.....	91
4.3.6	Accountability.....	91
4.3.7	Monitoring.....	91
4.4	A heuristic tool.....	92
4.5	FWF	93
4.6	SFI.....	94
4.7	SRC	94
4.8	NCN	94
4.9	SRDA	95



4.10	Summary	95
5	GENDER BIAS RISK ANALYSIS OF SPECIFIC CALLS IN THE CORE RFOS	97
5.1	Gender bias risk analysis of funding instruments	97
5.2	The funding instruments of core RFOs: overview of key aspects	98
5.3	FWF: ESPRIT- Early Stage Programme	100
5.3.1	General description	100
5.3.2	Decision-making and review process	101
5.3.3	Gender equality measures in place.....	102
5.3.4	Gender bias risk assessment	103
5.4	SFI: SFI Frontiers for Future Programme	103
5.4.1	General description	103
5.4.2	Decision-making and review process.....	105
5.4.3	Gender equality measures in place.....	110
5.4.4	Gender bias risk assessment	112
5.5	SRC: International Postdoc	112
5.5.1	General description	112
5.5.2	Decision-making and review process	114
5.5.3	Gender equality measures in place.....	116
5.5.4	Gender bias risk assessment	117
5.6	NCN: SONATA	117
5.6.1	General description	117
5.6.2	Decision-making and review process.....	119
5.6.3	Gender equality measures in place.....	121
5.6.4	Gender bias risk assessment	121
5.7	SRDA: General Call.....	122
5.7.1	General description	122
5.7.2	Decision-making and review process.....	123
5.7.3	Gender equality measures in place.....	125
5.7.4	Gender bias risk assessment	125
6	SYNTHESIS AND CONCLUSIONS.....	126
6.1	National funding regimes	125



6.2	Gender equality emphasis in the European Research Area.....	127
6.3	Gender Equality Policies of the RFOs	129
6.4	Gender bias risk	130
6.5	Continuing work in GRANteD	131
7	REFERENCES	133
8	APPENDICES.....	142
8.1	Documents analysed	142
8.1.1	Austrian Science Fund (FWF).....	142
8.1.2	Science Foundation Ireland (SFI)	143
8.1.3	National Science Centre (NCN).....	145
8.1.4	Slovak Research and Development Agency (SRDA)	145
8.1.5	Swedish Research Council (SRC).....	145



TABLES

Table 2.1. Research intensity in the national contexts of the core RFOs.....	28
Table 2.2. Women researchers in higher education institutions, women in grade A positions, in scientific boards and of University leaders, %.....	43
Table 2.3. Overview of the core Research Funding Organisations	44
Table 3.1. Topics addressed in the core RFOs' gender equality policy	52
Table 3.2. Gender equality measures in the GRANteD core RFOs.....	53
Table 4.1. Potential gender bias risk areas and factors in Research Funding Organisations...	92
Table 5.1. Funding instruments in the five core RFOs analysed by GRANteD: key aspects	99
Table 5.2. Basic information on the FWF ESPRIT Programme.....	101
Table 5.3. Basic information on the FRONTIERS FOR THE FUTURE programme.....	104
Table 5.4. Basic information on the SRC International Postdoc Grant	113
Table 5.5. Basic information on the SONATA programme, 2021 (SONATA 17)	118
Table 5.6. Basic information on the General Call VV 2020 programme.....	122

FIGURES

Figure 5.1. Funding cycle and gender equality policy and measures.....	98
Figure 6.1. Gender equality policy cycle in Research Funding Organisations.....	129



1 INTRODUCTION

1.1 Background

Academia, science, and knowledge production are persistently gendered and male-dominated arenas, despite increased national, European, and global awareness and interventions aiming for change (see, e.g., Riegraf et al., 2010; Caprile et al., 2012; Uhly et al., 2017; Drew & Canavan, 2020; Gibney & Schiebinger, 2020; O'Connor & White, 2021; O'Connor & Irvine, 2020; Steinþórsdóttir et al., 2020; Griffin et al. 2021; European Commission, 2021a and b; Rosa & Calvero, 2022). The role of research funding organisations in the efforts of changing academia, research organisations, knowledge production and society towards gender equality and diversity has become increasingly acknowledged in Europe and beyond. This is evidenced by increased national, regional and international collaborations of funding organisations on gender equality and diversity, such as the Gender-Net Plus action in Europe¹, the D-A-CH collaboration of German-speaking European countries² and gender equality actions of the Global Research Council³; integrating sex, gender and diversity analysis in policies of major research funding organisations (Håkansson & Sand, 2021; Hunt & Schiebinger, forthcoming); by integrating gender equality more intensely in the European Research Area and European funding framework Horizon Europe (European Commission, 2021d); by monitoring and evaluating efforts (Science Europe, 2017a), and in ambitious policy development of several individual funding agencies in Europe and beyond, some of which are going to be analysed in detail in this report.

Over ten years ago, a European Commission expert group consisting of scholars and experts from national research funding organisations reviewed European national research funding organisations' policies and activities on gender equality comprehensively in 33 countries (European Commission, 2009). It found wide variation among countries and national funding agencies across Europe in this respect, categorizing them into two main groups: the relatively inactive and the proactive (subdivided into: global gender equality leaders; newly active with fewer women in research, and newly active with more women in research).

The Gender Challenge report made extensive recommendations for actions to Research Funding Organisations (RFOs) and other stakeholders (European Commission, 2009; Husu & de Cheveigné, 2010). These recommendations addressed multiple aspects of the funding cycle and national research landscapes: structures, monitoring, gender equality action plans, composition of gatekeepers, including decision-making bodies and evaluators, transparency of evaluation criteria and data, conflict

¹<https://www.era-learn.eu/network-information/networks/gender-net-plus>

²<https://www.fwf.ac.at/de/news-presse/news/nachricht/nid/20150310-2111>

³https://www.globalresearchcouncil.org/fileadmin//documents/GRC_Publications/Statement_of_Principles_and_Actions_Promoting_the_Equality_and_Status_of_Women_in_Research.pdf



of interest and codes of conduct, flagged good practices and presented a comprehensive set of recommendations (European Commission, 2009), including:

Funding organisations should *establish a permanent structure* for monitoring gender equality in their activities. The structure should report to and be *supported* by the highest level in the funding organisation, and be given *adequate resources* (European Commission, 2009, p. 71, emphasis in original).

Funding organisations should make *action plans* on how they promote gender equality in their funding activities (European Commission, 2009, p. 71, emphasis in original).

All decision-making bodies of funding organisations should have *gender balance*, with at least 40% of each gender (European Commission, 2009, p. 72, emphasis in original).

The proportion of women among evaluators and reviewers should be increased to attain at least 40% of each gender (European Commission, 2009, p. 72, emphasis in original).

To identify and recruit more female evaluators and reviewers, *databases* of women scientists, and requests for excellent scientists and stakeholder organisations to suggest female evaluators should be used (European Commission, 2009, p. 72, emphasis in original).

Evaluation procedures, criteria and results should be made *public* (European Commission, 2009, p. 73, emphasis in original).

Procedures and criteria for *recruiting* evaluators and reviewers should be made explicit and published (European Commission, 2009, p. 73, emphasis in original).

Effective procedures to *prevent conflict of interest, unethical behaviour and any form of discrimination* in decision-making or peer review should be established. In codes of conduct for all involved in funding decisions, gender perspectives should be integrated (European Commission, 2009, p. 73, emphasis in original).

Equally comprehensive gender monitoring of the European research funding organisations as the Gender Challenge Report has not been conducted since 2009. However, the Gender Net Plus project⁴, a Horizon 2020 Cofund collaboration of 16 research funders in 13 countries, has recently monitored the situation ten years later, in 13 countries in EU, and including Canada, and Israel, building on the 2009 Gender Challenge Report, giving some indication of the more recent developments (Hermansson et al., 2021).

The Gender Net Plus monitoring demonstrated increased gender equality activities of the RFOs since 2009 in the participating research funding organisations. It is necessary to remind here that the

⁴ <https://gender-net-plus.eu/>



participating RFOs in the Gender Net Plus collaboration come from countries with more than average interest in gender equality advancement, thus the results may give a more positive picture which cannot be generalized to Europe as a whole. The share of women was at least 40 per cent among potential applicants to research funding (HEI researchers with a Ph.D.) in all European countries involved, except in natural sciences and technology. However, application rates differed: women were less likely to apply in two third of the countries involved, in 1/6 women and men were applying in equal proportion and in 1/6 women were more likely to apply (Hermansson et al., 2021). The results summed up according to the median value are presented as: “[...] in a ‘median’ country and scientific field, women HEI researchers apply for funding only 0.74 times as often as men HEI researchers do. Equivalently, in the median case men HEI researchers apply for funding 1.36 times as often as women HEI researchers do” (Hermansson et al., 2021, p. 66). This leads the authors of the report to urge RFOs to consider if women are less encouraged to apply for research grants and if funding calls might be directed towards men.

The same Gender Net Plus monitoring report also includes comparisons of success rates for women and men applicants for funding, by country and research field. The analysis and comparison illustrate big gender differences in success rates but also great variety according to these variables.⁵ Spain appeared as the only country where women have lower success rates than men in all research fields. The other ten countries, included in the comparison, showed big differences in favour of men in certain disciplines, while they similarly displayed differences in favour of women in other disciplines. Engineering was the field with the largest gender difference in success rates in favour of men. No systematic gendered trend in success rates was thus identified across countries or disciplines, but the report notes that follow-up and analysis is important, for example, to investigate if these differences are reoccurring or if they even out over time (Hermansson et al., 2021).⁶

Furthermore, the Gender Net Plus monitoring report concluded that most of the RFOs currently monitor the gender balance of selection committees and the evaluation panels. Gender balance in gatekeeping positions – decision-making positions, assessment panels and reviewers – had increased since 2009 in the participating countries, although in some countries from very low levels, but gender balance among such gatekeepers has not been achieved. Most of the RFOs included in the mapping currently monitor the success rates of women and men applicants and publish the results. Some RFOs

⁵ ‘Success rate’ defined in that report as: “[...] the success rates of the men and women that apply for research funding are studied; i.e., what proportions is funded out of the men and women that do apply” (Hermansson et al., 2021, p. 67).

⁶ Certain disclaimers are emphasized in the report, suggesting caution when interpreting the statistics regarding the success rates: in some countries some of the fields of research only include a handful applications (e.g. only 7 applications from women in Estonia in the field of Engineering). It should also be noted that the data for several countries included in the comparison are aggregated from more than one research funder and different calls, which could possibly also even out, or otherwise affect, the results (Hermansson et al., 2021, p. 69).

also monitor the average amount of funding for women and men. But only less than half of the RFOs analyse the difference in application behaviour of women and men (Hermansson et al., 2021).

To a certain degree mapping and following up of statistics and information on gender and research funding is also being done on supranational level, by the European Commission and included in the bi-annually published She Figures reports. The She Figures 2021 compares funding success rates by gender and gender balance in the scientific boards across Europe, both relevant as background and context for this report. Latest Europe-wide gender statistics on success rates in research funding, according to the She Figures 2021, demonstrate that, overall, in Europe, the funding success rate was higher for men than women by 3.9 percentage points. Among the EU-27 Member States and Associated Countries, this funding difference in favour of men was seen in most countries with available data (19 of 28 countries), with the largest difference found in Slovakia (7.7 percentage point). Conversely, in nine EU-27 Member States and Associated Countries, the funding success rate was higher for women than men. Funding success rates were closer to gender parity in four countries (difference of -0.5 to 0.5 percentage points): in Germany (-0.2), Slovenia (0.4), Finland (0.0) and Sweden (-0.1) (European Commission, 2021a, p.257).

Furthermore, women were less successful than men in all main disciplinary fields of R&D when applying for research funds in Europe, except in two fields: Agricultural Sciences and Humanities & Arts, according to the She Figures 2021. More specifically, the largest difference in favour of women was in Agricultural Sciences (0.8), while the largest difference in favour of men was in Natural Sciences (-2.5) (European Commission, 2021a, p.257).

The scientific boards in Europe continue to be male dominated with only one third of the members who are women, and a quarter of women as chairpersons in 2019. These figures include also other scientific organisations than RFOs. Only 13 of 33 EU-27 Member States and Associated Countries had more than 40% women among scientific board members, while five had less than 20% of women among board members (European Commission, 2021a, Figure 6.9).

To sum up this brief introduction to the field of grant allocation and research funding and gender more generally in the higher education sector and research and innovation; research, statistics, and monitoring reports have consistently showed, and continue to show, gender inequalities, gaps, disparities, and bias permeating and characterizing academia and higher education institutions (HEIs).

The GRANteD project (Grant Allocation Disparities from a Gender Perspective) was developed to address questions regarding gender bias in the research funding system and to take the research in this field further, broadening the focus beyond success rates. The project started in January 2019 and funded within the European Commission Horizon 2020 programme with six partners in five countries



(Austria, Germany, the Netherlands, Spain, Sweden).⁷ The project, aim, purposes, and research questions, are introduced below, before the focus of this report is presented, followed by four chapters presenting results and analyses. The report ends with a chapter summary, concluding discussion, and recommendations.

1.2 GRANteD

1.2.1 Aim, purpose, and objectives of GRANteD

The overall aim of GRANteD is to analyse the occurrence and causes of gender bias in research funding in Europe. It investigates potential gender bias in the allocation of research grants from a gender perspective.

The more specific aims of GRANteD are to: i) Identify the occurrence and dynamics of gender bias in grant allocation processes and its consequences for the researchers' careers, ii) Identify factors that cause gender imbalances before, during and after grant submission, iii) Assess the impact of gender equality policies in research funding organisations on gender bias, iv) determine the impacts of (gender biased) funding in careers of male and female researchers.

The purpose of GRANteD is also to develop tailored recommendations for research funding organisations and for research policy makers to avoid or mitigate gender bias in grant allocation and related processes and practices.

Therefore, the following objectives have been defined in GRANteD:

- a) Develop a sound methodology to investigate possible causes of gender bias in grant allocation processes and the impacts on careers of male and female researchers.
- b) Identify factors that potentially create gender biases in the grant allocation processes of RFOs.
- c) Provide a better understanding of gendered career inequalities caused by (gender biased) grant allocation processes.
- d) Raise awareness for gender bias in grant allocation processes and research careers in RFOs and other stakeholder organisations and thereby promoting Responsible Research and Innovation (RRI).
- e) Contribute to gender equality policies and the management of gender diversity.

1.2.2 Research questions of GRANteD

The GRANteD project aims to answer the following research questions:

⁷ <https://www.granted-project.eu>



- i. What factors need to be controlled for when studying occurrence of gender bias in grant application, allocation and in careers?
- ii. In which stages of the grant allocation process does gender bias occur?
- iii. Which mechanisms (factors and practices) produce gender bias before and in the grant allocation process?
- iv. Do grants have differential impacts on men's and women's careers? And vice versa, how does career success influence grant allocation?
- v. Which measures are already implemented in RFOs to prevent gender bias, how do they work and are they effective?
- vi. And what can RFOs and other stakeholders do to improve the grant allocation process, ensure fair evaluation outcomes based on gender and improve career opportunities for female researchers?

1.2.3 The structure of the GRANteD project

GRANteD consists of ten work packages (WPs), which include both quantitative longitudinal studies and analyses and qualitative case studies and analyses. WP1 and WP2 are dedicated to preparation activities, including in-depth literature review, elaboration of research models, and the selection of the RFOs to be included in the project. WP3 is devoted to the longitudinal study of the relations between performance, grant success and career success. WP4 will test a multilevel model of grant allocation to find out whether gender explains part of the application success and what factors explain gender bias. Work Package 5 has been developed specifically to investigate how gender equality policies could mitigate gender biased outcomes in research funding, but also how policies or lack thereof could constitute risks that unconscious gender bias appears in grant allocation processes. It is closely linked with the WP6 which is focusing on the grant allocation and policies in action and investigates the implementation of policies. WP7 focuses on application behaviour and institutional support for applicants in Research Performing Organisations (RPOs). WP8 is dedicated to the stakeholder interaction and WP9 compares the studied RFOs and grant schemes. In WP9 the findings are integrated and formulated to conclusions and recommendations. WP10 includes management tasks.

1.2.4 The GRANteD approach to gender bias in grant allocation

As the previous sections on the aim, purpose, and objectives of GRANteD have illustrated, the project adopts a broad, process-oriented perspective when investigating gender bias in grant allocation. This perspective presents a starting point for this report and is here further developed and elaborated. In a previous report from GRANteD (D2.1) an important distinction is made between the outcomes, for example success rates, and the processes that result in these outcomes (van den Besselaar et al., 2020). Adopting this distinction suggests that it is not possible to determine whether gender bias in grant allocation exists or not only by monitoring the outcomes of those processes. Instead, the processes

themselves must be explored and scrutinized. Gender differences in outcomes *can* be the result of gender bias in certain stages or phases of the research funding process, but they cannot be taken as evidence that the research funding process is *necessarily* biased, as there can be other underlying



explanations for the outcome. Likewise, equal success rates of women and men is not necessarily an indication that there is no gender bias in the research funding process. Instead: “[...] the proof of whether there is gender bias relates to the selection/decision *processes*” (van den Besselaar et al., 2020, p.10, emphasis in original; cf. e.g., Beck & Halloin, 2017).

This is thus also the organizational process perspective on gender bias which is adopted in this report. This report focuses on how some of the research funding processes in RFOs (for example decision-making, recruitment of reviewers, etcetera) are organized, structured, and systematized and how they organize, structure, and systematize research funding. The report particularly addresses issues concerning how national funding regimes influence these processes, and whether gender equality policies are facilitating them or if the lack of such policies brings into these processes potential gender bias risks.

This perspective will be further developed below when Work Package 5 is described in more detail, and in the subsequent chapters (see primarily introduction of chapter 4 and section 4.2).

1.3 Work Package 5: Formal policies related to grant allocation⁸

This report is the main Deliverable (D5.1) of the Work Package 5 (WP5) of the GRANteD project, with the work package title *Formal policies related to grant allocation*, with leading partner Örebro University (ORU), in Sweden, and participating partner Joanneum Research (JR), in Austria. As such, this report also constitutes the outcome of the fifth and last task of WP5, Task 5.5 *Synthesis report on contextual factors, gender bias risks analysis and gender equality policy analysis*.

WP5 is a complex and multifaceted work package focusing on policies related to research funding and grant allocation. The overall aim of WP5 is to provide the contextual background for the study of how policies are being implemented and practiced in grant allocation processes in the five selected so-called GRANteD core Research Funding Organisations (core RFOs) in five European countries: Austria, Ireland, Poland, Slovak Republic, and Sweden. The WP5 policy analysis therefore informs other Work Packages in GRANteD, specifically the empirical data collection and analysis in Work Package 6 (WP6) *Practices in grant allocation processes*, as well as Work Package 9 (WP9) *Consolidating results and developing recommendations*. The results from WP5 will also inform the GRANteD conceptual model which was developed to assess gender bias in grant allocation procedures and to assess the career effects for women and men. The conceptual model was developed in WP2 and used and tested in WP4. For this model WP5 provides several core variables concerning gender equality policies on both national level and organisational level as well as other contextual factors.

⁸ This section draws on the GRANteD Proposal (Schiffbaenker et al., 2018) and is provided here as a background and point of reference for readers outside of the GRANteD consortium.

The contribution of WP5 to the conceptual model is thus to systematically identify potential gender bias risks along the whole funding process. That information enables the project to analyse the relevance of national and organisational policies and of context factors on (gendered) funding outcomes. Chapter 6 in this report summarizes these core variables from WP5.

1.3.1 Objectives of WP5

The specific objectives of WP5 have been:

- To map national funding regimes including national research policies and the funding landscape in countries where the five core RFOs are situated
- To map specific regulations and policies guiding national RFOs
- To map specific regulations and policies related to grant allocation in the core RFOs including their gender policies in place
- To identify factors that may lead to gender bias in the grant allocation process, assess their relevance for policy development, including specific measures to counteract them according to previous studies and evidence in the area
- To conduct a thorough analysis and assessment of regulations and policies and their consistency and potential gaps in relation to existing evidence on gender biases in grant allocation processes.

1.3.2 Tasks of WP5

The five objectives of WP5 are reflected in the five Tasks (T5.1-T5.5) of WP5:

1.3.2.1 Task 5.1 Mapping of national research (funding) regimes

Task 5.1 involved, as a first step in WP5, the development of a framework for a systematic mapping of national research policies and the funding landscape, national regulations and policies that specifically concern grant allocation processes, in countries where the core RFOs are located. The framework that was developed also intended to identify relevant contextual factors for studying gender bias risks in grant allocation processes and gender equality policies in core RFOs. In the second step, this framework was used to collect and systematize the data considered as relevant in each of the five countries where the core RFOs were located. To systematize the data collection and facilitate the comparison between countries a template was developed and used. The results of T5.1 are presented in this report.

1.3.2.2 Task 5.2 Framework for assessing risk of gender bias and gender equality policy in core RFOs.

Task 5.2 entailed a development of a similar systematic framework that was produced in T5.1. However, while T5.1 focused on the macro level of national settings, T5.2 targeted the meso level of research funding organisations. For T5.2 the framework was intended to identify various elements of the institutional setup of RFOs, such as formal regulations and procedures, as well as contextual factors, that may lead to gender bias in the grant allocation process. The framework was also supposed



to include a systematization of equality policies in RFOs and relevant factors that support or inhibit their successful implementation. Based on the framework an extensive case report structure was produced to systematize the analysis of the institutional setup and gender equality policies (used for T5.3 and T5.4). This template was also used as a starting point for parts of the empirical data collection in WP6 (primarily Task 6.1 *Interviews with RFO staff on practices of reviewer selection, decision making and training of panel members*).

1.3.2.3 Task 5.3 Gender equality policy analysis

Task 5.3 involved adopting and using the framework developed in T5.2 for an analysis of national and organisational gender (or diversity) equality regulation and policies, relevant for the organisation of grant allocation processes. This analysis included the intervention logic, consistency, and potential gaps to assess the potential of specific policies developed to promote gender fair grant allocation to lead to the intended effects. The framework, with the case report structure and templates, developed as T5.2, facilitated a systematic and comparative approach for the five RFOs analysed. The results from T5.3 are summarized and presented in this report.

1.3.2.4 Task 5.4 Gender bias risk analysis

The report template developed in T5.2 was also further expanded to be used for an analysis of regulations, policies, and steering documents in the RFOs, relevant for examining the consistency and potential gaps in relation to existing evidence on gender biases, such as procedures related to reviewer selection and panel composition, eligibility and evaluation criteria and the decision-making process. The framework was used to analyse the potential risk for gender bias and identify policies and regulations that can generate gender bias in grant allocation processes. The results from this analysis were compared with the results from the analysis in 5.3 to reveal potential gaps. The results from T5.4 are summarized and presented in this report.

1.3.2.5 Task 5.5 Synthesis report on contextual factors, gender bias risks analysis and gender equality policy analysis

The synthesis report, that is, this Deliverable 5.1, contains a summary of results from T5.1, T5.3 and T5.4 for each core RFO. Furthermore, it compiles the main synthesis results from WP5 (T5.1-T5.5) to provide input for recommendations for future policy development.

1.4 Aim and purpose of report

This report presents a synthesis of gender equality policy analysis and gender bias risk analysis in the five European Research Funding Organisations (RFOs) in which GRANteD is conducting qualitative research on policies and practices, in Austria, Ireland, Poland, Slovak Republic and Sweden. The report also includes a contextual analysis of the RFOs in all five RFO national contexts. Moreover, a detailed analysis of one funding call and instrument in each of the five RFOs is included.

This report thus focuses on gender equality policies in RFOs, situated within their national context and frameworks (i.e., their funding regimes, see chapter 2). It includes analyses of both macro level and meso level. The macro level addresses the national context of RFOs while the meso level focuses on



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the level of the RFOs themselves. One more level of analysis is embraced in the report. Although this third level of analysis is not what traditionally has been understood as a micro level analysis (see e.g., O'Connor & Irvine, 2020), in this context, it could be understood as such, with the final analytical policy level addressing the funding instruments themselves. The analysis thus traces policies and gender bias risks from the national macro level, through the organisational RFO meso level, down to the micro level of the specific funding instrument.

1.5 Methodology, method, and empirical material

1.5.1 Qualitative textual analysis

The general research strategy adopted in WP5 is of qualitative character. This qualitative approach involves a focus on gaining an understanding of context-dependent findings by careful and systematic analysis and interpretations of meanings, concepts and patterns, and evaluations of the research subject (Creswell, 2014). Such a qualitative approach provides rich empirical data and analyses, appropriate for the aim of WP5.

More specifically the qualitative approach adopted in WP5 is that of textual analysis (cf. Silverman, 1993). The empirical data analysed was constituted by written texts such as policy documents, call texts, statements on gender equality approaches, guidelines for applicants and reviewers, etcetera (for a list of documents analysed, see Appendix) The texts were initially explored with the use of a qualitative content analysis (Krippendorff, 2013). The content analytical approach, which was adopted, entailed a preliminary coding process to assist in the interpretation and analysis of the texts, rather than mechanically counting the number of instances concepts or sentences appeared in the texts. The content analysis thus provided an initial and systematic overview of the content of the documents (cf. Krippendorff, 2013). The content analysis was guided by several different descriptive research questions, for example to which extent the documents included references to gender, gender equality, gender bias or similar expressions. Another important objective with the content analysis was to systematize the content of the descriptions of the application and review processes (primarily in the analysis of the instruments and call texts). These questions and objectives constituted the main so called textual categories, established as relevant for guiding the content analysis. However, more than merely counting the frequencies of the occurrences of these categories (or 'codes') in the texts, the methodological approach adopted for the textual analysis had a broader vision (Joffe & Yardley, 2004). This broader vision was executed with the use of thematic analysis, which thus complemented the initial content analysis approach by both deepening and focusing the interpretation of the data in the second step. The thematic analysis focused primarily on the manifest content of the data but also included themes on a more latent level and implicit references to for example equality. With the use of thematic analysis, the documents could be analysed in a more focused manner, concentrating the analysis on the primary themes (with 'themes' defined as "specific patterns found in the data in which one is interested" (Joffe & Yardley, 2004, p. 57)). The themes were developed both by deductive and inductive coding, meaning that some of the themes were identified in previous research and thus included in the code books used for the analysis, while other themes were derived from the texts themselves (cf. Fereday & Muir-Cochrane, 2006). The results from these thematic analyses are accounted for in the following chapters and systematically illustrated in grids and tables where themes



It is important to note that WP5 did not include studying documents-in-use (cf. Jacobsson, 2016). This perspective has instead been developed in WP6, the work package in which staff at the RFOs and panellists who review applications are interviewed about how the policies are implemented. Neither is WP5 concerned with the policy development, the production of documents and texts or the process that produced these documents (cf. Jacobsson, 2016), even if the historical timeline is shortly commented on especially in case of RFOs with very long history of engagement with gender equality. To some extent, however, the analysis situates the texts within a particular context and includes a focus on how the documents function in, and impact on, schemes of social interaction and social organisation (cf. Prior, 2016).

1.5.2 Methodological frame and data used

1.5.2.1 Selection of countries and RFOs

The design of the selection process and the criteria which are considered in the selection of cases is crucial in all scientific research. The selection of the five so called core RFOs in GRANteD included in the WP5 analyses was guided by a purposeful sampling strategy known as maximum variation sampling. Information-rich cases were thus purposefully selected to include a range of variation of countries and RFOs on dimensions of interests (Patton, 1990).

Despite an emphasis on having a diverse sample with regional variety covering all Europe, it was not possible for the GRANteD project to include a core RFO from a country in Southern Europe. Instead, the sample countries consisted of one country in Western Europe (Austria), one country sometimes categorized as belonging to the British Isles, but also as part of the Western Europe countries, (Ireland), two countries in Central and Eastern Europe (Poland, Slovak Republic) and, finally one country in Northern Europe (Sweden). Three of these countries are sometimes also categorized together as belonging to Central Europe (Austria, Poland, Slovak Republic). Two of these are however also distinguished as being post socialist countries (Poland, Slovak Republic), which added one more dimension to the country selection.

The variety of the five countries included in the GRANteD project could also be reflected upon in relation to the categorization mentioned above, made by the European Commission expert group (European Commission, 2009), which introduced the distinction between proactive and relatively inactive countries and national funding agencies regarding policies and activities on gender equality. Austria, Ireland, and Sweden were all categorized as proactive countries, with Sweden sub-grouped as one of the global gender equality leaders. Austria was included in a second sub-group of newly active countries with fewer women in research, while Ireland was named newly active with more women in research. Poland and the Slovak Republic were included in the group of relatively inactive countries.

The selection process regarding the RFOs was not managed within WP5, but WP1 and WP2, and was decided upon by the GRANteD consortium in the Project Steering Group Meeting in September 2019. Of the first choice RFOs selected, four out of five were successfully recruited to participate in GRANteD as core RFOs, and the fifth was recruited from the reserve list. All the five RFOs included as so-called



core RFOs in the GRANteD project and analysed in this report have agreed to collaborate with GRANteD. They have been informed about the scope, purpose and operationalization of the project and signed a Memorandum of Understanding outlining the formal collaboration agreement. For WP5 the most important aspect of this collaboration agreement included the willingness of the RFOs to provide the data needed for the analyses.

The details of the selection process or how the RFOs were identified and approached will however not be addressed extensively in this report, which concerns the activities in WP5.⁹ Instead, at this point we will only highlight some characteristics of the selected core RFOs. The first three core RFOs, which were selected in GRANteD, had demonstrated an advanced level of engagement with gender equality actions. The two other core RFOs were therefore selected based on them being so-called “starters” in the field of gender equality, with no or minor gender policies implemented. To include this variation and mix of RFOs was considered as essential in GRANteD where the focus is on studying gender bias, what influences bias, and how bias can be minimized, in different settings.¹⁰ The five selected RFOs thus constitute a heterogeneous sample displaying a variety of gender equality policies, timelines, and approaches. The selection of the five core RFOs, as will be further elaborated throughout the report, thus provides a unique opportunity to analyse both RFOs characterized by relatively long established and proactive traditions of gender equality policies, and RFOs in the beginning of developing such a policy framework.

The five GRANteD core RFOs are:

- Austrian Science Foundation (FWF)
- Science Foundation Ireland (SFI)
- Polish National Science Centre (NCN)
- Slovak Research and Development Agency (SRDA)
- Swedish Research Council (SRC)¹¹

The selection process regarding core RFOs in GRANteD also involved identifying and selecting one specific funding call and funding instrument in each core RFO for a more in-depth study. More information on that selection process and the results of that process will be provided in chapter 5 of this report where the analysis of the funding calls and funding instruments are included.

⁹ For more information on the selection of the five RFOs see Work Package 1; Deliverable 1.2 *RFO Mapping and their GE policies*, and Work Package 2; Task 2.3 *Selecting core RFOs for case studies* and Task 2.3 *Approaching the core-RFOs*. The Swedish Research Council (SRC) did not sign a MoU with agreement about data sharing and receiving research findings in return as the Swedish legislation and public procurement act would prohibit this. Instead, SRC provided the data considered public information according to the principle of public access to official records upon request from GRANteD.

¹⁰ These arguments are further elaborated and explained in GRANteD Deliverable 1.3 from Work Package 1 and Deliverable 2.1 from Work Package 2.

1.5.2.2 Selection of documents and mapping activities

The documents selected to be included as empirical material for WP5 and analysed in this report are primarily of two types, and were collected during two separate phases. In the first phase, the empirical material for Task 5.1 was collected, to map national research funding regimes for the five countries included in GRANteD. This type of empirical data was collected by means of desk research and included public national and international policy documents regarding research, innovation, development, and gender equality, primarily in the selected five countries. This mapping involved producing a profile for the research funding regimes in each of the five countries by consulting international, European, and national research policy documents, and compiling key gender disaggregated statistics published primarily by supranational organisations such as the European Commission (EC) and the European Institute for Gender Equality (EIGE).

The mapping also included not only explicit gender equality policies but also seemingly gender-neutral policies which might have an impact on gender equality and gender bias.

The mapping of national research funding regimes also encompassed contextual factors such as existing gender equality legislation, both for society at large and specifically for the R&D sector, as well as reviewing whether gender aspects were integrated in more general legislation related to the R&D sector. This information was gathered via national websites, documents, and websites from the RFOs, and from European and national reports used to collect the quantitative information described above.

The second type of mapping activities continued in the second phase of data collection with Task 5.2 and Task 5.3 and involved policies and additional other relevant administrative and strategic organisational documents of the core RFOs. Several of the documents used for the gender equality policy analysis of the five RFOs were provided by the RFOs; indirectly as they were publicly available on their websites, or directly upon request from the authors. Some of the documents and policies were identified during the kick-off meetings which were arranged with each of the five RFOs, to initiate the

¹¹ The RFOs are here presented in alphabetical order according to country: Austria, Ireland, Poland, Slovak Republic, and Sweden. For the remainder of the report, we however choose to depart from this order and instead present them in an order which reflects a categorization of them into two groups. To facilitate a more coherent and sound analysis and discussion we have chosen to present the three countries/RFOs/instruments with the most extensive policies and measures first (Austria/FWF, Ireland/SFI, Sweden/SRC) and the two countries/RFOs which are developing their policies and measures second (Poland/NCN, Slovak Republic/SRDA). This is thus also the order in which they will be presented in the analysis.

collaboration between the RFOs and GRANteD and facilitate the data collection. Participating in these kick-off meetings were GRANteD representatives from the work packages that gather primary data (WP5, WP6 and WP7), and from the RFOs, and on the agenda for the meetings were presentations of GRANteD, research to be conducted for WP5, WP6 and WP7, and presentations by the RFOs on their structures, policies and the specific funding instruments selected for more detailed analysis in GRANteD. In these kick-off meetings the GRANteD WP5, WP6 and WP7 teams were thus informed about relevant documents and the priorities of each RFO. In a few cases the staff interviews, performed as part of WP6, have also informed the analysis and the identification of certain documents important to include in the analysis. Most of the documents analysed are, however, publicly available on the websites of the RFOs. The documents were also complemented with information published directly on the websites of the RFOs (primarily about the RFO and the structure of the RFO). All the documents, and webpages, used in the analysis, are listed in the Appendices of this report.

1.5.2.1 Developing frameworks, templates, and report structures

A draft for a framework for T5.1-T5.5 and for the analysis of gender equality policy and for assessing risk of gender bias in the GRANteD core RFOs was described in the GRANteD proposal. It was, however, also necessary to further develop and elaborate on this initial framework. The development of the framework for the tasks in WP5 was informed by the GRANteD literature review in Work Package 1 (Cruz-Castro & Sanz-Menéndez, 2019). The framework was also expanded on by drawing on earlier qualitative research on gender equality in research funding, which the authors and GRANteD members had previously been engaged in, including the European Commission report Gender Challenge in Research Funding (EC, 2009; Husu & DeCheveigné, 2010; DeCheveigné et al., 2010); the GENDERC study (Schiffbänker et al., forthcoming; Vinkenburg et al., 2021; van den Besselaar et al., 2018) and the gender equality review of Swedish funding agency Riksbankens Jubileumsfond (Husu & Callerstig, 2018).

The mapping activities in Task 5.1 were guided by several contextual factors considered as essential for an analysis of a funding regime, for example: research intensity, global innovation index score, global competitiveness index score, women researchers in higher education institutions (HEIs), women in grade A positions, as HEI leaders, and in scientific boards. Two more indicators were included as key for the comparison between national research funding regimes: the Global Gender Gap Index (GGGI) by the World Economic Forum (WEF) and the EIGE Gender Equality Index (GEI). All these factors and indicators were compiled and systematized into templates and tables to provide a clear overview. The results from this mapping exercise and the tables used are included in this report.

The next step in WP5 involved building on these five national context reviews to address Task 5.2 and the development of the framework for the gender equality policies of the five RFOs and the gender bias risk analysis. This framework was developed by reviewing factors suggested to be relevant by the research literature: the history/timeline of gender equality actions in the RFOs, overall gender equality framework and goals, issues and topics addressed by the policy in more detail, responsibility and



accountability of the gender equality actions within the RFO, specific gender equality measures in place in more detail, also including other potentially relevant measures and practices that are not necessarily gender-marked. As part of Task 5.2 these factors were systematized and arranged into templates to increase overview and comparability between the RFOs.

The templates that were developed as part of Task 5.2 were subsequently used for Task 5.3, as tools for analysing institutional setup and gender equality policies in RFOs. Two complementing templates were developed. One of these templates systematised and arranged the topics in the gender equality policy, while the other template addressed the gender equality measures in place in the RFOs. Both templates are included, and used, in this report.

For Task 5.3 the gender equality policies of the five RFOs were compiled in five case reports, one for each RFO. Two of these case reports (for FWF and SRDA) were compiled by the Joanneum Research (JR) team, while three (SRC, SFI and NCN) were compiled by the Örebro University (ORU) team. These individual RFO case reports comprise extensive data and large parts of them are included in this report. The compilation of the data was structured according to the factors mentioned above.

Task 5.2 also involved developing a framework for Task 5.4 and the gender bias risk analysis in core RFOs. The framework for assessing potential gender bias risk areas draws on the gender equality policy analysis framework. In the GRANteD proposal this framework is described as involving the identification of various elements of the institutional setup of RFOs, like formal regulations and procedures as well as contextual factors that may lead to gender bias in the grant allocation process. The GRANteD proposal identified several features of grant allocation processes on the base of earlier research as important for emergent gender bias: selection of reviewers/panel composition; evaluation criteria (including eligibility criteria, like age and leave taken to care for children/sick/old people); decision making process, and language use. These criteria and features were similarly further developed in Task 5.4 in the same manner as in Tasks 5.1-5.3.

The framework, the templates, and the case report structures and the results of applying them on the empirical data is synthesized in this synthesis report on contextual factors, gender bias risk analysis and gender equality policy analysis (Task 5.5). The report also deepens and elaborates the analysis beyond that in the individual case reports and thus presents a synthesis of these five more extensive and detailed, although primarily descriptive, case reports.

1.5.3 Multilevel policy analysis

As O'Connor and Irvine (2020) point out, much previous work on gender equality policy and policy implementation has been focused on the organisational level, while a smaller number of studies have addressed the national or supranational level. Fewer still have included a multilevel approach. This type of multilevel approach to policy analysis was, however, considered as necessary for the GRANteD project. Research funding processes and grant allocation processes, which are the main areas for



investigation in GRANteD, are embedded in, and influenced by, a broader cultural, social, and economic context of the RFOs but also of a national and supranational context. This means that these processes are both directly and indirectly impacted by both formal guidelines, structures, regulations, laws, and policies on several levels, as well as informal values, norms, and power relations on these levels: supranational level, national level, and institutional level (Veselý, 2017). Gender equality policies are in themselves often “developed and operationalized in a multi-level environment” (Alonso, 2016, p. 174) and part of a “multi-level agenda on equality in science” (Alonso, 2016, p. 181). These different levels not only influence the RFO context – the relationship and connection between these levels are also key for gender equality change and for achieving non-biased grant allocation processes. O’Connor and Irvine conclude their study of gender equality in Irish HEIs: “The best possibility of leveraging change arises when measures to promote gender equality are driven at the state (macro); the HEI (meso); and the situational (micro) level simultaneously” (O’Connor & Irvine, 2020, p. 16).

The five core RFOs in GRANteD are public funding organisations and therefore influenced not only by their internal policies but also by state interventions and regulated by national legislation and national research policies (see e.g., OECD, 2018; EIGE, n.d.-a-e). Moreover, they are also positioned within countries which are member states of the European Union and the European Research Area (ERA) and thus adhere to the EU legal framework (European Commission, 2021c).

ERA is an area which the European Union set out to create in 2000, constituting a single, borderless market for research, innovation, and technology across the EU with seamless mobility of researchers and sharing of knowledge across borders. The national roadmaps for the European Research Area outline the measures that each member state implement to help strengthen the priorities agreed at EU level and how each member state will deepen its engagement with ERA. One of the ERA priority areas has, since 2015, been Gender Equality and Gender Mainstreaming in Research (ERA Priority 4). This priority area involves addressing gender imbalances in research institutions and decision-making bodies and integrating the gender dimension into R&D policies, programmes, and projects. The indicator, used by the European Commission, to monitor the progress in this area is the proportion of women a grade in Higher Education Sector.¹²

The EU legal framework is commonly perceived to exercise considerable influence on the national and regional level: “There is general consensus regarding how EU equality policies have helped promote gender equality in member states” (Alonso, 2016, p. 176). And this influence is not only associated with EU ‘hard and binding law’, but also ‘soft law’, and non-binding measures, benchmarking activities and initiatives and so called naming and shaming strategies. Alonso (2016, p. 177), writing about gender mainstreaming, describes the influence: “EU moral leverage, the provision of EU funding, or the dissemination of good practices all represent significant incentives to implement this strategy [gender mainstreaming] in member states”. One example of EU influence on gender equality in higher

¹² https://ec.europa.eu/commission/presscorner/detail/en/IP_20_1749



education is the new eligibility criterion to get access to funding from the programme Horizon Europe (European Commission, 2020). This eligibility criterion requires public bodies, RPOs and HEIs to, starting in 2022, to have a gender equality plan in place (European Commission, 2021c). The objective of the measure is stated as follows: “This will ensure sustainable institutional change” (European Commission, 2021d). The power that this EU measure is envisioned to wield on RPOs and HEIs is outlined in a research article: “These new political developments are now forcing public RPOs that have neglected or not systematically focused on gender equality as an institutional task to address this issue if they want to successfully apply for funding” (Dahmen-Adkins & Peterson, 2021, p. 2).

Furthermore, the policy analysis in this report includes another aspect of complexity as it was influenced by several different approaches and methods for analysis. Due to the high complexity of the policy analysis, encompassing several different levels, layers, and areas, an innovative approach was necessary. Instead of adopting one single policy analysis method, a set of several different methods were combined during different phases of the analysis (e.g., Andersson et al., 2018; Bacchi, 2009; Marshall, 1999; Shaw, 2004). The individual gender equality policy analyses of each of the five RFOs were for example performed primarily with an empirical approach, meaning with a focus on gathering information on which policies exist and other policy relevant information and describe the context in which they have been implemented. This means that those case reports mainly provided descriptive information, rather than valuate, prescriptive or predictive information (cf. Dunn, 2015). These aspects are instead developed in this report. The gender equality policy analysis in the five casereports were thus intended to form a basis and source for a subsequent elaborated and deepened analysis on policy framework, problems and topics addressed, policy performance, specific measures, risks with current policies, or lack of policies, and suggest future course of action and alternatives for acting on policy and policy actions.



2 CONTEXTUAL FACTORS: NATIONAL FUNDING REGIMES

2.1 Background: National funding regimes

Gender equality policies are developed, designed, and implemented in specific national settings. This report thus not only analyses the concrete existing gender equality policies, but also considers those contextual factors which constitute so called national funding regimes. National funding regimes are policy regimes which particularly concern the issue area of research funding. Policy regimes are „the governing arrangements for addressing policy problems“ (May & Jochim, 2013, p. 428). Adopting this regimes perspective and using it as a descriptive lens enables: „a backward mapping of governing arrangements for a given policy problem“ (May & Jochim, 2013, p. 427). The analysis thus does not commence with the existing gender equality policies, but instead with a mapping of the broader area of interest, i.e., research funding, and with the institutional and governing arrangements and contexts (i.e., laws, rules, administrative actions), and interpretative frameworks, which constitute the frame for dealing with this particular issue (May & Jochim, 2013).

This broader area of interest and the broader context is key to understand the emergence, decline or lack of established policies in an area, as the institutional and governing arrangements influencing the agenda-setting within an area. Agenda-setting constitutes the first stage of a policy cycle and involves the recognition of a set of problems (e.g., gender inequality in research funding and biased funding processes), and the placing of these problems on the agenda for consideration of public action. An agenda-setting process: „narrows a list of conceivable subjects within any domain [...] to those that actually are the focus of attention“ (Kingdon, 1993, p. 40). The problem thus needs to be identified as such by some level of government, which also suggests and ratifies authoritative actions to solve the problem (Jann & Weigrich, 2007). Agenda-setting involves focusing attention on an area in society and acknowledging certain groups' interests, and the necessity for intervention to solve what is perceived and identified as a problem. In addition: „policies do not develop in a vacuum, but are adopted in a crowded policy space“ (Jann & Weigrich, 2007, p. 44), which means that external coherence and needs have to be considered, and priorities are necessary. For a specific policy to be developed, certain criteria in the surrounding context thus must be present, and a policy window needs to be opened (Kingdon, 1993). 'Policy window' is a concept which emphasizes the importance of timing in the policy process as the policy window possibly stays open only for a moment or a certain period of time, when policy makers are open to new ideas and suggestions (Kingdon, 1993, p. 46). To understand the policy process, it is thus important to understand and map policy regimes.

Policy regimes are restricted to certain areas of issues, in this case research funding, and can be systematized and studied as organized around four dimensions (Wilson, 2000). The first dimension is that of power and power arrangements, for example which interest groups and professional associations are involved and are benefitting from the policy. The most powerful actors involved in policy development and agenda setting on national level are usually national and/or regional



governments. The second dimension involves the so-called policy paradigm, that is, the assumptions about the policy problem which shape how the problem is defined and which solutions are conceivable. The third dimension concerns the organisation, government and policy making arrangement, including the implementation structure, accountability, and the actors involved. Finally, the fourth dimension is the policy itself: “which embodies the goals of the policy regime. It also entails the rules and routines of the implementing agency” (Wilson, 2000, p. 258). These four dimensions of policy regimes are reflected in this chapter, where we identify the most relevant aspects of the five national contexts and compare them in terms of research intensity, research policy frameworks, including gender dimensions of them, overall gender equality of the society, and gender equality in research. Furthermore, general setup of the five core RFOs selected for more detailed analysis by GRANteD is also presented in this section.

The chapter should, however, not be perceived as a comprehensive description and analysis of the five national regimes, considering the variations in the public research and higher education systems, including variations in the non-university research organisations. That type of comprehensive mapping, despite relevant, is outside the scope of this report. Instead, the report aims to identify and pinpoint key variables in the national funding regimes to provide a more informative, focused, and concentrated picture of the five countries’ national regimes for background to our analysis.

This chapter of the report highlights how national contexts and funding regimes of the five core RFOs included in the GRANteD analysis: Austria, Ireland, Poland, Slovak Republic, and Sweden, differ in several respects, related to overall research intensity and research policy frameworks, as well as regarding gender equality in research and in society.

2.1.1 Research intensity

Research intensity can be seen as an indicator of how important role research activities and research organisations play in a given society. Table 2.1. presents comparative figures and key performance indicators related to research intensity in the five countries where our core RFOs are located. Firstly, in overall research intensity, the national contexts of the five core RFOs range from very low to very high, measured by the share of R&D of GNP, with Sweden and Austria showing clearly higher values than the EU average, and the other three countries lower than the EU average. In all other indicators in Table 2.1, the Slovak Republic shows the lowest values, and Sweden the highest. Sweden and Ireland have the highest shares of human resources in science and technology, and highest share of scientists and engineers in labour force, clearly above the EU average, whereas in Poland and Austria, the human resources variables are close to the EU average.

The Global Innovation Index (GII) 2020 is a composite index consisting of several subindexes relevant for R&I. On the GI, Sweden ranks as the 2nd highest, globally and in Europe. Ireland and Austria are ranked as 9th and 11th in Europe, also performing above expectations, whereas Poland and Slovak Republic are both ranked among the lowest end of the EU-27 countries.



In the Global Competitiveness Index (GCI) Sweden is ranked as global 8th and as fourth in Europe, Austria, and Ireland relatively high and close to each other as 21st and 24th respectively, with Poland and Slovakia clearly lower but still among the global top 50. In the EU Innovation Scoreboard 2021, Sweden is classified as Innovation Leader, Austria, and Ireland as Strong Innovators, and Poland and Slovak Republic as Emerging Innovators¹³.

Table 2.1. Research intensity in the national contexts of the core RFOs

Country	R&D, % of GDP 2020 ¹⁴	Scientists and engineers of total labour force 2020 ¹⁵	Human Resources in S&T (HRSTC) % of labour force 2020 ¹⁶	Human Resources Score, European Innovation Scoreboard 2021 ¹⁷	Global Innovation Index rank 2020 ¹⁸	Global Competitiveness Index rank 2019 ¹⁹
Austria	3.2	9.6%	23.5%	127.76	19th globally, 11th in Europe (perf. above expectations)	21
Ireland	1.2	12.2%	31.8%	160.16	15 th globally 9th in Europe (perf. above expectations)	24
Poland	1.4	7.9%	25.9%	67.74	38 globally 25th in Europe (perf. matches expectations)	37
Slovak R.	0.9	5.1%	18.0%	79.42	39th globally 26th in Europe (low performer)	42
Sweden	3.5	13.5%	34.2%	194.61	2nd globally, 2nd in Europe (perf. above expectations)	8
EU-27	2.3	7.9%	24.8%	n.a.	n.a.	n.a.

¹³ https://ec.europa.eu/info/research-and-innovation/statistics/performance-indicators/european-innovation-scoreboard_en#european-innovation-scoreboard-2021

¹⁴ <https://ec.europa.eu/eurostat/web/products-eurostat-news/-/ddn-20211129-2>

¹⁵ Eurostat HRST_ST_NCAT. Proportion of scientist and engineers of total labour force, aged 25-64

¹⁶ Eurostat HRST_ST_NCAT. Proportion of tertiary educated employed in science and technology of the labour force in the age group 25-64.

¹⁷ Composite index of Human Resources consisting of percentage of population which has completed tertiary education aged 25-34, new doctoral STEM graduates aged 25-34 and population involved in life long learning: <https://ec.europa.eu/research-and-innovation/en/statistics/performance-indicators/european-innovation-scoreboard/eis#>

¹⁸ https://www.wipo.int/global_innovation_index/en/2020/

¹⁹ https://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf

2.1.2 National research policy goals

When it comes to the national R&D strategies, Austria, Ireland, and Sweden all frame their strategies in terms of global innovation leadership. Sweden which is classified in the EU Innovation scoreboard as innovation leader: "should be one of the leading research and innovation countries and an eminent knowledge nation", according to the Research and Innovation Bill 2020 (Prop. 2020/21:61). To keep the position as "innovation leader" new major financial investments are being made in R&D.²⁰ The Austrian Research, Technology and Innovation RTI-Strategy 2030 (Österreichische Bundesregierung, 2020) sets up a goal to increase R&D of GDP, and to catch up with the international leaders and strengthen Austria as an RTI location, with focus on effectiveness and excellence, and knowledge, talents and skills, and the R&D in 2020 as indicated in Table 2.1 is currently clearly above EU average and one of the highest in EU-27, reflecting Austria's position in the EU 2021 Innovation scoreboard as "strong innovator". The central vision of the Irish Innovation 2020 programme was for Ireland to become a global innovation leader (Department of Further and Higher Education, Research, Innovation and Science, 2015). Ireland is currently according to the EU 2021 Innovation scoreboard a "strong innovator". In the new National Research and Innovation Strategy 2021-27, the goal from the 2020 programme is re-established: „the Government's ambition for Ireland to become a Global Innovation Leader has not diminished" (Department of Further and Higher Education, Research, Innovation and Science, 2021, p. 3).

As already mentioned above, Poland and Slovak Republic are both characterized as "emerging innovators" in the EU Innovation scoreboard 2021. In both the Polish and Slovak national strategies there is more focus on national contexts. The Dynamic Poland 2020 strategy: Strategy for Innovation and Efficiency of the Economy, adopted by the Ministry of Economy in 2013, included goals about adjusting the regulatory and financial environment to the needs of innovation; provide the economy with appropriate knowledge and human resources; ensure sustainable use of resources; but it also mentioned increasing the internationalisation of Polish economy (Ministry of Economy, 2013).²¹ In Slovak Republic, enhancing the transfer and impact of public research, and improving policy governance are in focus, according to the OECD outlook on research policy 2016 (OECD, 2016).²² The goals of the so called Phoenix Strategy in the Slovak Republic, from 2011-2015, was to develop human resources, foster the internationalisation of R&D, better co-operation between the academic sector and industry, and popularise science and technology (OECD, 2021). In a more recent OECD report on science, technology, and innovation, one of the "Hot STI issues" for the Slovak Republic is described to

²⁰ <https://www.regeringen.se/artiklar/2020/09/stora-satsningar-pa-forskning-i-arets-budget/>

²¹ https://kigeit.org.pl/FTP/PRCIP/Literatura/006_1_Strategia_Innowacyjnosci_i_Efektywnosci_Gospodarki_2020.pdf

²² https://read.oecd-ilibrary.org/urban-rural-and-regional-development/oecd-regional-outlook-2016/slovak-republic_9789264260245-41-en#page6



be: “Improving the governance of the national innovation system (transparency, co-ordination, administration of EU funds, universities, etc.)” (OECD, 2021, p. 379).

2.2 National gender equality framework

Overall gender equality in the five societies in focus can be compared using two composite indicators which are updated annually: the Global Gender Gap Index by World Economic Forum and the European Institute for Gender Equality (EIGE) Gender Equality Index. Both indexes are composites of several subindexes. The Global Gender Gap Index consists of four subindexes: Economic Participation and Opportunity; Educational Attainment; Health and Survival; and Political Empowerment. The EIGE Gender Equality Index consists of six core domains: Work; Money; Knowledge; Time; Power, and Health, and two additional dimensions: Intersecting Inequalities, and Violence against Women²³.

Of the five national contexts compared here, Sweden ranks highest in both indicators, in GGI 2021 with fifth smallest gender gap globally, and ranked in the top position in Europe in the EIGE GE Index since 2010, as well as in the latest Index in 2021. Ireland ranks in top ten countries which have smallest gender gaps globally in the GGI 2021, and is ranked 7th in the EU in 2021, having also advanced faster than EU average. Austria also ranks high globally in the GGI 2021, as 21st, and reaches in the GE EIGE Index the same average score 68 as is the EU average. In both GGI 2021 and EIGE GE Index, ranks and scores of Poland and Slovak Republic are close to each other and clearly lower than those of the three other countries: Poland and Slovak Republic rank as global 75th and 77th respectively in the GGI 2021, and they ranks are at the lower end of the EU countries in EIGE GE Index 2021, 23rd and 24th respectively, clearly below EU average.

National gender equality frameworks in our sample countries show both similarities and differences in legislation and infrastructure as well as policy measures and are briefly described in the next sections.

2.2.1 Austria

In Austria the principle of equality is embedded in the Federal Constitutional Law (Bundes-Verfassungsgesetz, B-VG), whose Article 7 states that ‘all nationals are equal before the law’ and excludes any privilege based on sex (among others) (EIGE, 2019a). This is a clear legal commitment to gender equality to promote de facto equality between women and men, by eliminating existing inequalities. This holds for the whole Austrian federation: The Länder (broadly speaking, regions) and municipalities commit for the promotion of equal status of women and men and the implementation of measures to achieve gender equality (EIGE, 2019a; Wroblewski et al., 2018). Since 1979, the Equal Treatment Act has regulated the equal treatment of women and men at work in private enterprises (EIGE, 2019a).

²³ <https://eige.europa.eu/gender-equality-index/about>

The Constitution includes references to the gender mainstreaming tool of gender budgeting since 2009 and since 2011 gender mainstreaming, including gender budgeting and gender-neutral language, has been implemented in legislation, funding programmes and public procurement (EIGE, 2019a).

In Austrian government, the national gender equality machinery, the Department for Women and Equality was established 1997 in the Federal Chancellery, and having since been administratively located under different Ministries, is back in the Federal Chancellery since 2018. The Department has seven sections and is headed by the Minister for Gender Equality and Women²⁴. The Department monitors and reports on issues regarding the elimination of discrimination against women and equal treatment and reports to the Committee on the Elimination of Discrimination Against Women (EIGE, 2019a).

2.2.2 Ireland

In Ireland, gender equality legislation was introduced in the 1970s after Ireland first became a member of the European Economic Community (EEC). The introduction of broader equality legislation in the Equal Status Acts (2000-2015) and the Employment Equality Acts (1998-2004/2008), together with new equality infrastructure in the 2000s, established protection against discrimination on nine grounds (including gender) in employment and in access to services (EIGE, n.d.-b).

The principle of equality and gender equality is also embedded in the Equal Status Acts 2000-2011, the Disability Act, 2005, and in the Irish Human Rights and Equality Commission Act, 2014 (IHREC Act 2014). By these laws all public Irish institutions are legally obliged to promote equal opportunities and eliminate discrimination in accordance with their Public Equality and Human Rights Duty (Section 42 of the IHREC Act 2014) (HEA, 2016). The actions applicable to all government departments and public bodies include to carry out ongoing gender impact assessments, gather sex-disaggregated data, address emerging inequalities and report annually on their progress and plans for further actions, address gender equality formally in strategic planning, policies and practices, and annual reports, including in recruitment and promotion of staff in the public service. Departments can also develop in-house expertise in gender mainstreaming and consider gender impact in the development or review of strategies, as well as ensuring that the design and review of funding and grant schemes include measures on gender equality (EIGE, n.d.-b).

In a report from EIGE (2019b) on gender equality framework in Ireland, it is noted that gender equality is not mentioned in the constitution of Ireland and that some of the articles in the constitution “recognize a narrow role for women, in the home and as mothers, with no similar passage on fathers” (EIGE, 2019b, no page).²⁵

²⁴ <https://www.bundeskanzleramt.gv.at/agenda/frauen-und-gleichstellung/ueber-die-sektion.html>

²⁵ <https://eige.europa.eu/gender-mainstreaming/countries/ireland>



2.2.3 Sweden

Gender equality is high on the policy agenda in Sweden and has been an important policy focus since the 1970s. Current Swedish government has declared itself to be a feminist government. The principle of gender mainstreaming has been applied in gender equality policy since 1994. In Sweden, equality between women and men is addressed by both general laws and regulations, and those focusing specifically on the higher education and research sector: the Instrument of Government Chapter 1 Section 2 (part of the Constitution), the Discrimination Act (2008:467), the Higher Education Act (1992:1434), the Higher Education Ordinance (1993:100), and the Governmental Ordinances of the national research funding organisations: the Swedish Research Council, SRC (Ordinance 2009:975), the Swedish Research Council for Health, Working Life and Welfare, Forte (Ordinance 2007:1431), the Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning, Formas (Ordinance 2009:1024), and Sweden's Innovation Agency, Vinnova (Ordinance 2009:1101). The government regulation of both HEIs and RFOs in the Higher Education Act and the Higher Education Ordinance is complemented by a system of so called annual appropriations directions via so called regulations letter (in Swedish „regleringsbrev“), which are annual public service agreements from the Ministry of Education and Research, to the HEIs and the RFOs which also include gender equality duties (EIGE, n.d.-e). Furthermore, official statistics are legally obliged to present person-based data by gender, if there are not specific reasons for not doing so (Ordinance 2001:100, paragraph 14).

The objective of the governmental gender equality policy is that women and men are to have the same power to shape society and their own lives. This overall objective has six interim objectives: (i) economic equality, (ii) equal division of power and influence, (iii) gender equality in education, (iv) equal distribution of unpaid housework and provision of care, (v) gender equality in health, care, and social services, and (vi) men's violence against women must stop. These objectives were set up in 2006 in a government bill titled *Makt att forma samhället och sitt eget liv – nya mål i jämställdhetspolitiken* [The Power to Shape Society and Your Own Life: Towards New Gender Equality Policy Objectives] (2005/06:155: only available in Swedish). In November 2016, the government presented a policy document titled *Makt, mål och myndighet – en feministisk politik för en jämställd framtid* [Power, Aims and Authority – Feminist Policy for a Gender-Equal Future] (2016/17:10; only available in Swedish) to the national parliament. The document set out the future direction of Swedish gender equality policy with an organisation for policy implementation, a system for follow-up, a 10-year national strategy for the prevention and elimination of men's violence against women and two new policy sub-goals (concerning equality in education and health, care, and social services).

Currently (2021), responsibility for gender equality and human rights issues in the cabinet are placed in the Ministry of Labour. Two important national authorities in this respect are the Discrimination Ombudsman and the Swedish Gender Equality Agency. The Discrimination Ombudsman is an independent authority who works against discrimination based on six discrimination grounds, reviews complaints on discrimination and harassment and surveys how employers, universities, and schools work to prevent discrimination (Discrimination Act 2008:567; Act on the Discrimination Ombudsman 2008: 568). The Swedish Gender Equality Agency²⁶ was established in 2018 to contribute to effective



implementation of Swedish gender equality policy. The agency works in close cooperation with other government agencies, municipalities, county councils, regions, civil society and business and industry. The main task of the gender equality agency is to coordinate, follow up and provide various forms of support in the area of gender equality. The work is carried out in the following domains: Analysis and follow-up of the development towards gender equality; support to government agencies, county councils, regions, and municipalities in the implementation of gender equality policy; coordination and implementation of certain assignments in the area of gender equality policy. The National Secretariat for Gender Research at Gothenburg University is a national and Nordic knowledge hub, originally established in 1998 and funded by the government, currently focusing on: "sustainable conditions for education, research and working life"²⁷.

2.2.4 Poland

The most important laws in Poland related to gender equality are the Constitution, the Anti-Discrimination Law and the Labour Act. The Polish Constitution adopted in 1997 assures equal rights for women and men in all spheres of life. In particular, Article 33 of the Constitution states that: "men and women shall have equal rights [...] regarding education, employment and promotion, and shall have the right to equal compensation for work of similar value, to social security, to hold office, and to receive public honours and decorations". Additionally, Article 18 defines marriage as "being a union of a man and a woman" and guarantees the protection of "family, parenthood and motherhood". Article 71 states that mothers before and after birth should receive assistance from the public authorities²⁸. Furthermore, the Act on Implementation of Several EU Regulations on Equal Treatment from 2010 provides the legal ground for the Plenipotentiary for Equal Treatment, as well as delegates part of the responsibilities for monitoring the principle of equal treatment to the Human Rights Defender (Szelewa, 2016).^{29 30}

There is no separate gender equality machinery, as discrimination based on gender is one of several fields of discrimination covered by the activities of the Plenipotentiary for Civil Society/for Equal Treatment. The Plenipotentiary for Civil Society and Equal Treatment is the central government institution for monitoring and carrying out the policies aimed at combating discrimination, and the Commissioner for Human Rights as the non-political, constitutional body (Szelewa, 2016).

The Commissioner for Human Rights (Ombudsperson) is the constitutional authority, who is responsible for the legal protection of human rights and freedoms. According to the Law on Equal

²⁶ <https://www.jamstalldhetsmyndigheten.se/en>

²⁷ <https://www.gu.se/en/nsfg>

²⁸ [https://www.europarl.europa.eu/RegData/etudes/STUD/2016/571372/IPOL_STU\(2016\)571372_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2016/571372/IPOL_STU(2016)571372_EN.pdf)

²⁹ [https://www.europarl.europa.eu/RegData/etudes/STUD/2016/571372/IPOL_STU\(2016\)571372_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2016/571372/IPOL_STU(2016)571372_EN.pdf)

³⁰ <https://www.equalitylaw.eu/downloads/5505-poland-country-report-gender-equality-2021-1-87-mb>



Treatment of 2010, The Commission for Human Rights is the second national institution which involves the national machinery for the enactment of equal treatment. In consequence, the responsibilities with regards to the policy field of equal treatment have been added to the main tasks performed by the Commissioner.³¹

The Law on HE and Science 2018 does not mention gender equality but has some pregnancy and parenthood related protections for both staff and students.³² The Act on the Principles of Financing Science (Journal of Laws [Dz. U.] of 4 June 2010) stipulates that maternity and paternal leave should not be included in the calculation of maximum age for young researchers in the grant application process.³³

The anti-feminist attitudes and anti-gender campaigns in the Polish society should also be mentioned as an important part of the gender equality policy context as these attitudes have been depicted as reflected in „the aversion towards the gender equality policies that were part of the state-socialist policies and official propaganda“ (Szelewa, 2016, p. 7).

2.2.5 Slovak Republic

The legal framework concerning gender equality in Slovakia consists of the Constitutional ban of discrimination and other constitutional protection of equality between men and women, and the Anti-Discrimination Act from 2004.³⁴ The Constitution³⁵ article 12 states that: “people are free and equal in dignity and rights” and that: “fundamental rights and freedoms are guaranteed to everyone in the territory of the Slovak Republic regardless of sex, race, colour of skin, language, faith and religion, political or other thoughts, national or social origin, nationality or ethnic origin, property, descent [‘rod’ in Slovak]³⁶ or other status. No one may be harmed, preferred or discriminated against on these grounds” (Magurová, 2020, p. 10).³⁷ Furthermore, the Constitution also permits special protection and

³¹ [https://www.europarl.europa.eu/RegData/etudes/STUD/2016/571372/IPOL_STU\(2016\)571372_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2016/571372/IPOL_STU(2016)571372_EN.pdf)

³² <https://konstytucjadlanauki.gov.pl/content/uploads/2020/06/act-of-20-july-2018-the-law-on-higher-education-and-science.pdf>

³³ https://en.uw.edu.pl/wp-content/uploads/2014/06/act_on_the_principles_of_financing_science.pdf

³⁴ All the Slovak Acts are available in Slovak online in Slov-Lex, a legislative and information portal: <https://www.slov-lex.sk/web/en>. Some of them, including the Constitution, are also available and translated into English: elsewhere <https://www.vop.gov.sk/constitution-of-the-slovak-republic>, <https://www.ustavnysud.sk/ustava-slovenskej-republiky>

³⁵ Act No. 460/1992 Coll. Constitution of the Slovak Republic.

³⁶ “The term ‘gender’ is translated into Slovak as ‘rod’. The Slovak term ‘rod’ is also used as the translation of ‘descent’ and ‘lineage’. Some institutions translate the Slovak term ‘rod’ as ‘gender’ and as a result identify not only sex, but also gender, understood as socially constructed differences between sexes, as ground of prohibited discrimination that is expressly stated in the Constitution and other laws” (Magurová, 2020, p. 14).

³⁷ These translations of the Slovak Constitution into English are reproduced from the Country report on: “Gender equality. How are EU rules transposed into national law” for Slovakia, reported on by Zuzana Magurová, to the European Commission, as part of the European network of legal experts in gender equality and non-discrimination: <https://www.equalitylaw.eu/downloads/5303-slovakia-country-report-gender->



preferential treatment for certain groups – women, minors, and disabled people. These include Chapter Five on economic, social, and cultural rights, Article 38, which guarantees to women, minors and the disabled an increased level of health protection at work and special working conditions, and Article 41, Section 2 that guarantees to pregnant women special treatment, protection in labour relations and corresponding working conditions.³⁸

The Anti-discrimination Act³⁹ is a general act on equal treatment in public and private relationships and protection against discrimination. Article 2 Section 1 of the Anti-discrimination Act prohibits discrimination on the following grounds: sex, religion or belief, race, nationality or ethnic origin, disability, age, sexual orientation, marital or family status, colour, language, political affiliation, or other conviction, national or social origin, property, lineage [‘rod’ in Slovak] or any other status or on grounds of reporting of crime or any other wrongdoing. It covers direct discrimination, indirect discrimination, harassment, instruction to discriminate, incitement to discriminate and victimisation and, after the second amendment, in effect since April 2008, also sexual harassment.⁴⁰

The Department of Gender and Equal Opportunities⁴¹ (within the Ministry of Labour, Social Affairs, and the Family, MLSAF) is responsible for coordinating Slovakia’s gender equality policy. The Department is part of the MLSAF and is under the direct supervision of the Minister. It is recognised as the main body responsible for the gender equality agenda at government level. No other ministries or state agencies have a gender equality unit or focal points (EIGE, n.d.-d).

The Department coordinates the activities of the Committee for Gender Equality, an advisory body of the Governmental Council for Human Rights, Minorities and Gender Equality. The Governmental Council was established in 2011. It serves as an expert, advisory and consultative mechanism of the government. It is headed by the Minister of Justice and is composed of high-level representatives of each ministry and experts in the related areas of the Council's responsibilities (EIGE, n.d.-d).

The Slovak National Centre for Human Rights was established in 1993. Since 2004, it has served as a national independent body under the Equal Treatment Directive of the EU. Its role is governed by the Anti-discrimination Act. The Centre monitors, evaluates and issues expert opinions on compliance with the equal treatment principle and the Anti-discrimination Act, provides legal assistance (including legal representation) to victims of discrimination, prepares, and publishes reports and recommendations on issues related to discrimination, and carries out training and awareness-raising activities. The Centre is

[equality-2020-pdf-1-37-mb](#). This second-hand source is selected due to Magurová including the explanation on the interpretation of the Slovak word “rod”.

³⁸ <https://www.equalitylaw.eu/downloads/5303-slovakia-country-report-gender-equality-2020-pdf-1-37-mb>

³⁹ Act No. 365/2004 Coll. on Equal Treatment in Certain Areas and on Protection against Discrimination and on amendment of certain Acts (Anti-discrimination Act).

⁴⁰ <https://www.equalitylaw.eu/downloads/5303-slovakia-country-report-gender-equality-2020-pdf-1-37-mb>

⁴¹ <https://www.gender.gov.sk/en/>



responsible for providing assistance to the victims of discrimination on all grounds covered by the Anti-discrimination Act (EIGE, n.d.-d).⁴²

Slovakia is committed to gender mainstreaming but without a legal commitment. The National Gender Equality Strategy for the Years 2014–2019 provides the only framework for gender mainstreaming and foresees it as the principal policy method to increase gender equality. As the Strategy was adopted by the government, it represents a binding commitment. However, the implementation infrastructure for gender mainstreaming is missing (EIGE, n.d.-d).

The first document in Slovakia to define gender mainstreaming and include measures to tackle structural aspects of gender inequality was the National Strategy for Gender Equality 2007-2013, followed by the National Action Plan 2010-2013 adopted by the government. These were followed by the National GE Strategy and Action Plan for 2014-2019⁴³. The Action Plan assigns responsibility, deadlines and financial resources for every task but does not include indicators to support and measure the implementation of objectives. Even though gender mainstreaming and positive actions are perceived as the core principles of the policy documents, gender mainstreaming methods are stipulated to a limited level and in many cases relate to the European Structural Funds (ESF) rather than national policy-making processes (EIGE, n.d.-d).

In a recent comparative article of gender equality in Israel, Slovakia, and Portugal (Diogo et al., 2021) state of the art of gender equality framework in Slovakia is summarized as follows:

Slovakia does not have its own gender equality regulations regarding economic and political contexts, and only regulations of the EC are applied. However, equality between men and women is stated in the Constitution of the Slovak Republic, and prohibition of discrimination based on gender as well as the obligation of equal remuneration for men and women for the same work are parts of the Slovak Labour Code (Diogo et al., 2021, p.19).

The only exception mentioned by Diogo et al. (2021) is the Law on Equal Treatment in Certain Areas and Protection against Discrimination.

2.3 Gender equality in research and innovation

How is gender equality integrated in the national research policy? In three of the five countries: Austria, Ireland and Sweden, gender equality is clearly foregrounded in the key general research policy documents and in the University legislation, whereas in our mapping of research policy documents of Slovak Republic and Poland gender issues were being addressed in a limited scope and mainly related to motherhood and parenthood. The timeline of addressing gender equality also varies between the

⁴² <http://www.snsip.sk/en/>

⁴³ https://www.gender.gov.sk/en/files/2015/06/Strategy_EN.pdf

countries. In Austria and Sweden, gender equality in universities and research has been on the agenda for several decades (see, e.g., Fogelberg et al., 1999), whereas Ireland has more recently, during the last ten years, intensified remarkably its gender equality activities in this respect. In Poland, only relatively few universities have developed gender equality action plans (European Commission, 2021d), but some recent information suggests that the work on Gender Action Plans has been initiated in many universities (Siemieńska, 2021, personal communication).

2.3.1 Austria

The Federal Law for Equal Treatment in Federal Bodies describes affirmative action in areas in which women are underrepresented. However, this law only applies for public universities. Austria has 22 public universities which are the largest group of HEIs in terms of student numbers in the country, 21 universities of applied sciences, 16 accredited private universities and 14 university colleges of teacher education.⁴⁴

Non-university research organisations are covered by the general Equal Treatment Act. In the Equal Treatment Act gender equality is prescribed, but no affirmative action. Additionally, Austrian University Act contains several laws pertaining to gender equality in public universities. In the Austrian University Act, gender equality is described as a guiding principle (§2) and a task for universities (§3). Therefore, Austrian universities are encouraged to establish measures to increase the number of women in leadership positions, as well as targeted support to female junior academics. The University act gives universities a duty to implement a Plan for the Advancement of Women as part of their statutes (§19), to create administrative units for coordinating activities towards gender equality, women's advancement, and gender research (§19) and to establish a Working Group for Equal Treatment (§42) (EIGE, n.d.-a; Wroblewski et al., 2018).

Several different national organisations/Ministries are key actors in the field of gender equality in Austria related to research and HE (EIGE, n.d.-a). The unit Gender and Diversity Management in the Ministry of Education, Science and Research is responsible for coordinating the legal gender equality prescriptions and several stimulatory initiatives.⁴⁵ Another Ministry, the Ministry of Climate Action, Environment, Energy, Mobility, Innovation and Technology is organising a major, national initiative called FEMtech, to support women in research and technology, and promote equal opportunities in industrial and non-university-research, at universities of applied sciences and in focus areas of research and technology. The activities within FEMtech are designed to raise awareness and enhance the visibility of women in research and technology, and include, for example keeping a database of female experts and arranging networking meetings.⁴⁶ The Research Funding Organization, Austrian Science Fund (FWF) (i.e., one of the five GRANteD core RFOs), runs gender mainstreaming activities, supports

⁴⁴ <https://www.bmbwf.gv.at/en/Topics/Higher-education---universities/Higher-education-system.html>

⁴⁵ <https://www.bmbwf.gv.at/Themen/HS-Uni/Gleichstellung-und-Diversität.html>

⁴⁶ <https://www.femtech.at>

the career development of female academics, coaches female researchers, and promotes gender in research.⁴⁷ Finally, also the Austrian Research Promotion Agency (FFG) is a key actor as it implements gender mainstreaming in all work areas (EIGE, n.d.-a).⁴⁸

The Austrian government agenda 2013-2018 included two goals related specifically to gender and academia: promoting women's advancement and work-life balance in higher education (sub-chapter 'science'); and increasing the number of women in leadership positions in academia and research (sub-chapter 'women'). The Austrian Research, Technology, and Innovation RTI-Strategy 2030 (Österreichische Bundesregierung 2020) defines several actions to promote gender equality in research: 1) gender budgeting in all research funding activities, 2) career development for women in basic and applied RTI young researcher programmes and their field of work and 3) actions to improve the reconciliation of work and family life.

Since the 1990s, Austrian public universities are required to implement a Plan for the Advancement of Women ("Frauenförderungsplan" in German) as part of their statutes⁴⁹. Since 2015, the University Act further requires the public universities to have an Equality Plan. In the Plans for the Advancement of Women, most universities elaborate how the university implements the legal gender equality duties and mainstreams gender equality in the decision-making procedures. Each university is also required by law to have an Equal Treatment Commission to monitor discrimination, and administrative units coordinating gender equality and women's advancement initiatives, and gender in research. Projects that exceed legal prescriptions are more often outlined in the gender equality plans of universities; such projects might be projects regarding gender budgeting or mentoring. These plans are developed and regularly updated by the universities' Equal Treatment Commissions (EIGE, n.d.-a).

In this kind of context, Austrian universities and non-university research organisations conduct a broad variety of gender equality initiatives. The focus lies on topics such as: awareness of gender issues, gender budgeting, individual support measures (grants and/or coaching) for female academics, initiatives to improve networking between female academics, initiatives to facilitate the reconciliation of work and family responsibilities, and prevention of sexual harassment (EIGE, n.d.-a).

Stimulatory gender equality initiatives are implemented by the two main Austrian RFOs, one of which is discussed in more detail in this report. The Austrian Science Fund (FWF) organises gender mainstreaming activities along three dimensions (EIGE, n.d.-a): measures to support the career development of female academics; gender awareness, women in decision-making, and gender aspect in Flagship research programmes (Special Research Programmes (SFBs) and Doctoral Programmes (DKs)). The Austrian Research Promotion Agency (FFG) strives for attaining gender balance in their staff

⁴⁷ <https://www.fwf.ac.at/en/about-the-fwf/gender-issues>

⁴⁸ <https://www.ffg.at/en/FFG/The-FFG>

⁴⁹ https://www.oesterreich.gv.at/themen/dokumente_und_recht/frauenfoerderung/Seite.3440003.html

at all levels), promotes gender awareness trainings for employees and ensures that gender-sensitive criteria are used in the evaluation of project proposals (EIGE, n.d.-a).

2.3.2 Ireland

In Ireland, the Innovation 2020 programme identifies that Ireland has the opportunity to build its international reputation for gender equality through improved participation of women in research and innovation activities (Ireland ERA Roadmap, 2016). At the time of finalizing this report (i.e., January 2022), the Department of Further and Higher Education, Research, Innovation and Science (2021) is establishing a new National Research and Innovation Strategy for 2021-2027. In the so called “consultation paper” on this strategy that so far was the only available text, ‘gender’ is only mentioned once while ‘equality’ and ‘women’ are not mentioned. Gender is mentioned together with research integrity and open science as areas in which Ireland is described to have made “good progress” in terms of policy direction and development of good practices. It is also stated that the next strategy, following the Innovation 2020, needs to ensure that this progress is strengthened and fully integrated into research practices “rather than being seen as ‘add-ons’ or depending on champions to progress the issues”. These areas are also described as pivotal to ensure research excellence. More details are, however, not included in this consultation paper (Department of Further and Higher Education, Research, Innovation and Science, 2021).

The Athena Swan Charter was originally developed by the Equality Challenge Unit in the UK as an accreditation scheme to support change towards gender equality in higher education. It is an initiative to support HEIs and departments in their sustainable gender equality work and build capacity for evidence-based equality work.⁵⁰ The charter was adopted by Irish higher education and launched in early 2015. The Athena Swan Charter in Ireland awards academic institutions and departments for cultural and systemic changes to address gender inequality, particularly in STEM and medicine.⁵¹ Engagement with the charter is a key pillar of Ireland’s national strategy for gender equality, with progress linked to institutional eligibility for funding from Ireland’s major research agencies (HEA, 2016). Crucial for launching the Athena Swan Charter in Ireland was the Athena SWAN Ireland National Steering Committee which was formed in 2013 and it instigated and accelerated the launch. One of the key stakeholders in this committee was the funding agency SFI (Drew, 2022).

The extension of the charter to Ireland from the UK was made possible through funding from the Higher Education Authority (HEA), which covers applications to the charter from 26 higher education institutions (cf. also O’Connor & Irvine, 2020). The Irish HEA thus funds the Athena Swan charter in Ireland and dedicates resources and training to support the HEIs to develop their Gender Equality

⁵⁰ <https://www.advance-he.ac.uk/equality-charters/athena-swan-charter#whatis>

⁵¹ <https://www.advance-he.ac.uk/equality-charters/international-charters/athena-swan-ireland>



Plans, which are key documents for achieving the Athena Swan Awards (European Commission, 2021a).

In 2016, three of the largest Irish funding agencies (SFI, IRC and HRB) announced that they will require HEIs to have Athena Swan gender equality accreditation to be eligible for research funding by the end of 2019 (SFI, 2016b). In taking that step, the funding agencies adopted a key recommendation from the expert group's National Review of Gender Equality in Higher Education Institutions (HEA, 2016). The funding agencies also announced that they would step up the requirement and by the end of 2023 the HEIs would need to have required a silver level accreditation to be eligible for competitive research funding (SFI, 2016b).

With the commitment to the Athena Swan Charter, thus comes a strive for Athena Swan certification (HEA, 2018). All of Ireland's universities and institutes of technology and several colleges participate in Athena Swan Ireland. By the end of 2018 all Irish universities had attained a bronze certification (Fritch et al., 2019). There are currently (April 2021) 88 award holders in Ireland (87 Bronze and 1 Silver). 19 institutions (universities, institutes of technology and colleges) hold awards, as well as 69 departments. (Advance-HE, 2021).⁵²⁵³ As part of their work to achieve Athena Swan Status, several of the Irish HEIs have implemented measures such as quotas, cascade quotas or cascade monitoring tools to promote and recruit women and men based on the proportion of each gender in the pool of candidates, i.e., at the grade immediately below (European Commission, 2021a).

2.3.3 Sweden

In Sweden, gender mainstreaming approach is applied generally as a policy principle across all sectors, also in research policy, since the mid-1990s. Sweden has, from a European perspective, a long history of national gender equality initiatives in society and in the sector since the 1970s, including national policy reports on gender equality in research (e.g. SOU 1983:4; Swedish Council for Gender Equality in Higher education 2011); earmarked professorships for underrepresented gender in the 1990s (see, e.g., Jordansson, 1999); and funding for centres of excellence in gender research (SRC, 2011). The most recent initiatives include the gender mainstreaming duty to public research funding organisations 2013-2018, which was a part of the government's gender mainstreaming duty (the GMGA-programme; Gender Mainstreaming in Government Agencies), for 60 public authorities.⁵⁴ Starting from 2016 universities and higher education institutions were given a gender mainstreaming duty by the

⁵² https://www.advance-he.ac.uk/sites/default/files/2021-09/Athena%20SWAN%20Ireland-list%20of%20awardees_August%202021.pdf

⁵³ Drew (2022 p. 26), however, states that: "There are currently 71 Bronze award holders in the Irish HEI sector (19 institutions and 52 School/Departmental AS awards) [...]". This information seems to be collected from March 2021: <https://www.advance-he.ac.uk/news-and-views/significant-step-forward-gender-equality-five-institutions-ireland-awarded-athena>

⁵⁴ <https://www.jamstalldhetsmyndigheten.se/en/gender-mainstreaming/government-agencies-higher-education-institutions/government-agencies-in-the-gmga-programme-2>



government (the GMA-programme; Gender Mainstreaming in Academia), including a gender mainstreaming plan and annual reporting (Peterson & Jordansson, 2022).⁵⁵ The recently established new public authority, the national Gender Equality Agency is providing support to higher education institutions in this task.⁵⁶

The 2020 Research and Innovation Bill for Sweden for the years 2021-2024 lists four main measures to meet the key challenges for research and innovation (Prop. 2020/21:60). These are: open science; immaterial resources; gender equality, and conditions for research careers in universities and higher education. The Research and Innovation Bill mentions gender equality in research and innovation in several contexts, including the need to continue to work to increase recruitment of female professors to reach the government's goal of gender parity of new professorial recruitments in 2030 (Prop. 2020/21:61).⁵⁷

Gender equality is a dimension of quality assurance in the Swedish Higher Education sector. The Swedish Higher Education Authority (UKÄ) is an independent government agency, responsible for quality assurance of higher education and research, legal supervision of higher education, monitoring efficiency, and statistics in the higher education sector.⁵⁸ Since 2016, gender equality is one of three perspectives of the model used for UKÄ's quality reviews of the Swedish HEIs.⁵⁹ This means that the gender equality perspective should permeate all activities of the HEIs (UKÄ, 2016). The gender equality perspective means that equality between women and men and gender mainstreaming are key quality factors considered in UKÄ's reviews. UKÄ's reviews of the Swedish HEIs thus always include an examination of "how a gender perspective is included in the processes at every level of the HEIs' organisations" (UKÄ, 2016, p. 20).

2.3.4 Poland

In Poland, the Ministry of Science and Higher Education (MNiSW) distributes the state budget for scientific research according to certain principles and regulations. In 2011 the Ministry regulations were amended to take into consideration maternity or childcare leave. The new regulations mean that if a researcher receives a grant or scholarship this can be suspended and then resumed after maternity leave when the researcher has returned to full professional activity (Siemieńska et al., 2016a). The Parent-Bridge programme of the Foundation for Polish Science 2007-2013 was supporting young

⁵⁵ <https://www.jamstalldhetsmyndigheten.se/en/gender-mainstreaming/government-agencies-higher-education-institutions/higher-education-institutions-in-the-gma-programme>

⁵⁶ <https://www.jamstalldhetsmyndigheten.se/en/gender-mainstreaming/government-agencies-higher-education-institutions>

⁵⁷ <https://www.regeringen.se/rattsliga-dokument/proposition/2020/12/forskning-frihet-framtid--kunskap-och-innovation-for-sverige/>

⁵⁸ <https://english.uka.se/about-us/what-we-do.html>

⁵⁹ The other two perspectives being: student and doctoral student perspective and working life perspective.



scientist mothers to return to work and pregnant scientists to carry out research projects funded by external sources; it was supported by European Structural Funds (Lipinsky, 2014, p. 28).

The status quo of gender equality in Polish HE has also been investigated, evaluated, and analysed by gender equality experts and researchers (Siemieńska, e.g., 1992; 2000). Siemieńska describes women in Polish academia as „winners among losers“, due to a general lack of career possibilities in higher education and lack of external funding, which has made more men pursue non-academic careers outside universities (Siemieńska, 2000). A relatively recent EU Review on Poland on Higher Education and science concluded:

Poland must respond to the existing discrimination towards female researchers. Despite commendable progress made in increasing women's participation in HE and science system, there is clear gender bias in academic titles and positions as well as in the distribution of research grants. (Marklund et al., 2017, p. 20).

2.3.5 Slovak Republic

In the Slovak Republic, gender equality in research is referenced in a general gender equality policy document (National Strategy for Gender Equality in the Slovak Republic, 2014-2019). The Strategy mentions as operational objectives in the field of education and research the following: elimination of negative gender stereotypes in education; creating a suitable environment and effective mechanisms for the implementation of gender equality in the field of science, research, and higher education; and enhancing the knowledge on existing forms of inequalities between women and men by strengthening the research in this area as well as up-to-date gender statistics. Campaigns to encourage girls and boys to science, technology and IT have been launched by the Government as well (European Parliament, 2013, p. 22-23).

2.4 Gender balance in research

Researchers in higher education are the main applicant pool for research funding for the RFOs we are focusing on. When comparing the human resources in higher education by gender in the five country contexts, it is striking that they have currently very similar proportions of women in higher education research in general, as well as in the highest, grade A positions (see Table 2.2 below). In all five countries, as well as in EU on average, four out of ten higher education researchers are women, and for grade A, around two out of ten, also close to the EU average. It must, however, be pointed out, that there are different historical developments and dynamics as well as contextual reasons behind this seemingly similar representation of women in these five countries. Ireland, for example, recently displays a larger increase in the proportion of women among grade A staff than the rest of the countries or EU-countries on average. The level of representation of women among grade A staff in Irish HEIs increased from 20,6% in 2015 to 25,6% in 2018. (European Commission, 2021a).

In Poland, the share of women in Grade A positions has historically been relatively high, compared to



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other European countries. Siemieńska (2000) emphasizes that the relatively high level of women in Grade A position in Polish higher education must be understood against a backdrop of men leaving these positions for more attractive, prestigious, and financially more rewarding positions outside of academia. Women thus „began to fill the vacuum“ (Siemieńska, 2000, p. 170) created when men left academia relatively more rapidly than in other countries. One contributing factor to this situation was probably the drop in funding for science in Poland during the 1990s. Currently women’s share among grade A positions is notably higher than in other EU countries. A contextual analysis of the relatively high level of women leaders of higher education institutions in Sweden is also in place. There, changes in the role and position of Vice-Chancellor (Rector/President) have been suggested as an explanation to why men started to withdraw their interest from these positions, allowing women to advance instead (Peterson, 2016; Peterson 2015).

Given the rather similar level of representation of women in grade A in the five countries, it is noteworthy that there is a clear difference in current representation of women in other positions of power and decision-making in research and academia. When comparing the proportion of women in scientific boards, Austria, Sweden, and Ireland have clearly higher share of women in scientific board positions than the EU average, whereas Poland and Slovak Republic clearly lower share than the EU average. When only 18% of European higher education institutions which award PhDs are led by women rectors and equivalent, the countries in our sample show a large variation in this respect, from one out of ten women among leaders in Poland to near parity in Sweden.

Table 2.2. Women researchers in higher education institutions, women in grade A positions, in scientific boards and of University leaders, %⁶⁰

Country	Women researchers in HE, % (2018)	Women in grade A positions, % (2018)	Women in scientific boards, % (2019)	Women leaders of HE institutions, % (2019) ⁶¹
Austria	40.8	25.1	40.6	25.8
Ireland	45.3	25.6	46.9	18.2
Sweden	43.5	28.2	49.5	47.1
Poland	45.6	25.2	24.9	10.9
Slovak Rep.	46.2	27.2	21.3	21.9
EU -28	43.2	26.2	31.1	18

⁶⁰ Source: EC She Figures 2021 (European Commission 2021a); Eurostat.

⁶¹ She Figures 2001: For Austria, Poland, Slovak Republic and Sweden, heads of universities or assimilated institutions based on capacity to deliver PhDs, proportion (%) of women, 2019, and for Ireland, heads of HE institutions, proportion (%) of women.

2.5 Core RFOs' overall frameworks

In this subchapter, we shortly introduce the overall frameworks of the five RFOs which are specifically in focus in GRANteD and called core RFOs in this report. These are the Austrian Science Fund (FWF), Science Foundation Ireland (SFI), the National Research Council (NCN) in Poland, the Slovakian Research and Development Agency SRDA, and the Swedish Research Council (SRC). Table 2.3. presents key information of the five RFOs, the founding year, budget, profile, governance, and funding instruments.

All except the FWF are founded in the 2000s, and all are or belong to the key public research funding organisations in their respective countries. They have a broad selection of funding instruments and fund mainly basic research in all fields, with a few exceptions: the SFI and the SRDA also fund applied research, and the SFI is mainly focusing on the STEM fields. The annual budget the RFOs distribute for research funding is largest in the SRC, 637 million €, whereas the FWF, SFI and NCN budgets range between 200 to 270 million € annually, and the SRDA annual budget is clearly lower, 39 million €.

Table 2.3. Overview of the core Research Funding Organisations

	Founded	Budget	Profile	Governance	Funding instruments
FWF	1967	€251.2 million Total grants 2020 ⁶²	Central funding organisation of basic research in Austria	Separate legal entity under Austrian law (Research & Technology Funding Act, or FTFG)	Clusters of Excellence, Programmes, stand- alone projects, awards, doctoral and postdoctoral programmes, international mobility etc.
SFI	2000	€208.3 million 2021 ⁶³	Oriented towards basic research and applied research & the study of, education in & engagement with STEM	Agency of Department of Further and Higher Education, Research, Innovation and Science, run by a board appointed by the Minister	Individual and collaborative awards for early-stage, mid- stage and established highly-esteemed research leaders
SRC	2000	€637 million	Support to highest quality research in all fields	Government agency under Ministry of Education	Project funding, career and mobility support, infrastructure etc.

⁶² FWF Annual Plan 2020.

[https://www.fwf.ac.at/fileadmin/files/Dokumente/Ueber den FWF/Publikationen/FWF-Jahresberichte/fwf-annual-report-2020.pdf](https://www.fwf.ac.at/fileadmin/files/Dokumente/Ueber_den_FWF/Publikationen/FWF-Jahresberichte/fwf-annual-report-2020.pdf)

⁶³ SFI Annual Plan 2021. <https://www.sfi.ie/research-news/publications/SFI-Annual-Plan-2021.pdf>



		Total grants 2020 ^{64/65}			
NCN	2010	€284.4 million 2019 ⁶⁶	Funds basic science projects in all fields	Supervised by Ministry of HE and Science	Funding instruments across scientific careers
SRDA	2005	€40 million Total grants 2020 ⁶⁷	Supports research and development particularly in science and technology	State non-profit organisation under Ministry of Science, Education and Sport	Primarily General calls International collaboration

2.5.1 Austrian Science Fund (FWF)

The Austrian Science Fund was established 1967. The bodies of the FWF include the Supervisory Board, the Executive Board, the FWF Board and the Assembly of Delegates. The Supervisory Body elects the FWF's President and Vice Presidents, the Assembly of Delegates the FWF Board's reporters, their alternates and four members of the Supervisory Board. The Assembly of Delegates is appointed by the universities, other Austrian research institutions and the supervisory authorities (gender balance needs to be taken in consideration). The tasks of the Supervisory Body are to approve financial statements, annual budget estimates, long-term plans and the FWF's annual work plan, whereas the FWF Board is responsible for making grant decisions for all the FWF's funding (Wysocki 2020).⁶⁸ There are also Expert Juries & Boards and an International Strategic Advisory Board.

The President of the FWF is responsible for the external representation, chairs the FWF Board and the Executive Board and assumes the direction of the FWF offices. The president may be deputized in all of his or her tasks by a member of the Executive office. The Executive Board is composed of the FWF President, three Scientific Vice-Presidents and the Executive Vice-President (currently, January 2021, consisting of three women and two men).⁶⁹ Its main task is to coordinate the organisation's activities and the definition of the FWF's strategic objectives as well as developing and furthering its funding programmes. In addition, the Executive Board takes part in negotiations with Austrian and European research policymakers, cooperates with universities and other scientific institutions in Austria and

^{64/65} SRC Annual Report 2020:

<https://www.vr.se/download/18.6675b4ac1787151b21016/1617030867173/Vetenskapsrådets%20årsredovisning%202020.pdf>

⁶⁶ NCN Annual Report 2019 (the report provides the budget in PLN).

https://www.ncn.gov.pl/sites/default/files/pliki/centrum-prasowe/NCN_raport_2019_ang.pdf

⁶⁷ SRDA Annual Report 2020: <https://www.apvv.sk/buxus/docs/agentura/vyrocnne-spravy/apvv-vs-2020-en.pdf>

⁶⁸ Additional information was obtained on the FWF website: <https://www.fwf.ac.at/en/about-the-fwf/organisation>

⁶⁹ <https://m.fwf.ac.at/en/about-the-fwf/organisation/executive-board>



abroad, and represents the FWF at the national and international level. The members of the Executive Board are also members of the Assembly of Delegates and of the FWF Board. The Scientific Vice-President oversees a specialist department of the FWF.

The Supervisory Board oversees numerous powers of monitoring and approval. It adopts resolutions on the FWF's annual accounts as well as its annual budget forecasts and its multi-annual and annual work plans. The Supervisory Board elects the President and the Vice-President based on a shortlist of three candidates submitted by the Assembly of Delegates. Upon consultation with the President, it appoints the Executive Vice-President.

The Assembly of Delegates makes decisions on the rules of procedure for its own activities as well as those of the Executive Board and the FWF Board. It is also in charge of approving the FWF's annual report and the submission of a shortlist of three candidates for the office of President and elects the members of the FWF Board, based on a proposal by the Executive Board, as well as four members of the Supervisory Board.

The FWF Board is responsible for deciding on funding for research projects. The FWF has established an International Strategic Advisory Board to challenge its funding activities with state-of-the-art expertise from world-renowned researchers. The expert juries and boards deployed in certain FWF programmes submit funding recommendations for the FWF board. These are the START/Wittgenstein Jury; PEEK Board; and Science Communication Jury.

The Secretariat handles day-to-day operations at the FWF. It is headed by the FWF's President and is subdivided into three divisions: (1) Specialist departments (Life Sciences, Humanities and Social Sciences, Natural and Technical Sciences, Mobility and Women's Programmes); (2) Strategy departments (International Programmes, National Programmes, Analysis); (3) Internal departments (Public Relations, Finance, Auditing, IT, Organisations & Human Resources, Legal Affairs & Committee Support).

2.5.2 Science Foundation Ireland (SFI)

The Science Foundation Ireland (SFI) was established in 2000 on initiative of the Irish Government to administer the €646 millions allocated to the Technology Foresight Fund. Its statutory basis is found in the Industrial Development Act, 2003 and the Industrial Development Act (Amendment), 2013. The SFI is an agency of the Department of Further and Higher Education, Research, Innovation and Science, and run by a board appointed by the Minister for Further and Higher Education, Research, Innovation and Science. SFI was transferred from the Department of Enterprise, Trade and Employment in January 2021 to the new Department of Further and Higher Education, Research, Innovation and Science.

SFI funds research that promotes and assists the development and competitiveness of industry, enterprise, and employment in Ireland. Focus is on oriented basic research and applied research and



the study of, education in, and engagement with STEM. SFI provides awards to support scientists and engineers working in the fields of science, technology, engineering, and mathematics that underpin biotechnology, information and communications technology and sustainable energy and energy-efficient technologies. A more recent and significant amendment to the SFI Act in 2013 widened SFI's remit further to include both oriented basic research and applied research. The extension of SFI's remit to include applied research will enable the outcome of oriented basic research funded by SFI to be taken closer to market, which in turn increases the potential of research to yield commercial opportunities and jobs as well as other societal benefits.⁷⁰

The SFI Board appointed by the Minister consists of 12 members (including the Director General) and has had three chairpersons since 2003 – two men and one woman. Under the board there are four different committees: Grant Approval Committee, Audit and Risk Committee, Management Development and Remuneration Committee, and Board Nominations Advisory Committee. The committees are established by the Board and the members of the committees are appointed by the Board. SFI has had five Directors Generals since it was founded in 2001, all men.

2.5.3 Swedish Research Council (SRC)

The Swedish Research Council (SRC) was established in 2000 by Act 2000:662, to support highest quality research in all fields. It was merging previous disciplinary Research Councils into one organisation. It is Sweden's largest governmental research funding body and funds research in all fields of science, mostly basic research. A large part of the funding provided by the Swedish Research Council consists of researcher-initiated research project funding, and in addition the SRC funds research career and mobility support. Furthermore, it provides funding for research infrastructures, research environments, graduate schools, various forms of collaboration, and for Swedish membership in several international organisations and major research facilities. The SRC is also conducting analysis of research policy and advising the Government in research policy issues.⁷¹

The Swedish Research Council is a government agency within the Ministry of Education. As a government agency or authority, it receives instructions from the Government. The instructions are a statutory instrument for the agency. The Ordinance 2009:975 with instructions to the SRC (amended several times since 2009) define its tasks, governance, and organisation. Gender equality promotion is explicitly mentioned in the ordinance as tasks of the SRC, in paragraph 2, moment 12: „integrate a gender equality perspective in the agency's activities and promote gender equality in distribution of research funding“, and moment 13: „Contribute to that a sex and gender perspective will be included in the research funded by the agency, when applicable“ (Swedish Higher Education Ordinance, 2009:975).

⁷⁰ <https://www.sfi.ie/about-us/about-sfi/history/>, <https://www.sfi.ie/about-us/about-sfi/what-we-do/>

⁷¹ <https://www.vr.se/english/about-us.html>



The Research Council is headed by a Board and a Director-General, who is the head of the agency. The Board of the Research Council has overall responsibility for operations as a whole and makes decisions on general and strategic research issues according to the directives and guidelines adopted by the Parliament and Government. Six of the members are elected by an assembly of electors, which, in turn, are appointed by the higher education institutions in Sweden. The Chairperson and the remaining two members of the Board are appointed by the Government.⁷²

The Swedish Research Council has six individuals serving in the role of Secretary General. In 2021, there were three women and three men occupying this role. The General Secretaries are part of the Swedish Research Council's management team and are responsible for initiating, promoting, and following up issues in their specific area. The Secretaries General are active researchers and, as a rule, are employed by the Swedish Research Council on a part-time basis for a maximum period of six years. Each Secretary General is affiliated with one or more of the SRC Scientific Councils, Councils or Committees, with responsibility for managing the cases dealt with there.⁷³

Under the Board, there are the scientific councils for humanities and social sciences; medicine and health; and natural and engineering sciences; the council for research infrastructures, as well as the committees for educational sciences, artistic research, and development research. Finally, there are committees for clinical therapy research and the national coordination of clinical studies.⁷⁴

Most of the members of scientific councils, councils and committees are selected by the research community. As in the case of the election of the members of the Board, these are elected by electors. Some of the members are appointed by the Board of the Swedish Research Council, while several additional members are appointed by the Government.⁷⁵

The Board for 2022-2024 consists of eight members, 4 men and 4 women, including the chair (female), appointed by the Government.⁷⁶

The Director-General is responsible to the Board for ensuring that operations are conducted in accordance with the directives and guidelines decided by the Board. The Swedish Research Council has about 250 employees and is divided into six departments – the departments for research funding,

⁷² <https://www.vr.se/english/about-us/organisation.html>

⁷³ <https://www.vr.se/english/about-us/organisation/secretaries-general.html>

⁷⁴ <https://www.vr.se/english/about-us/organisation/scientific-councils-councils-and-committees.html>

⁷⁵ <https://www.vr.se/english/about-us/organisation/board/how-members-of-the-board-and-scientific-councils-are-appointed.html>

⁷⁶ <https://www.vr.se/english/just-now/news/news-archive/2021-12-15-new-members-of-the-swedish-research-councils-board-and-scientific-councils-2022-2024.html>

research policy, research infrastructure, communication, administration, and the department of Sunet and associated services.⁷⁷

In 2020, the Swedish Research Council paid SEK 6.7 billion in funding, mostly to basic research in all areas of science and research infrastructures. A large part of the research funding (3,8 billion SEK) went to projects that were proposed by the researchers themselves (researcher-initiated research). The Swedish Research Council prepared in total 5 451 applications during 2020. Of these, 942 applications were granted (SRC, 2021b).⁷⁸

The quality of applications is assessed by peer review. In 2020, a total of 870 researchers served as members of review panels, with nearly half (48 per cent) of the members of the review panels being from higher education institutions outside of Sweden (SRC, 2021b).⁷⁹

2.5.4 Polish National Science Centre (NCN)

The National Science Centre/National Centre for Science (NCN) was established in 2010, and started its activities in 2011 (NCN, 2020a). The agency is based in Krakow, rather than Warsaw, which has been interpreted as a conscious decision to signal that the agency is separate, objective, and free from political influence (Siemieńska et al., 2016a). NCN is governed by the Act of 30 April 2010 on the National Science Centre (NCN, 2020a) and is supervised by the Polish Ministry of Science and Higher Education (MNiSW), which also manages most of the public HEIs in Poland. MNiSW also delegates the distribution of the state budget for scientific research to two funding organisations: NCN and the National Centre for Research and Development (NCBiR). While NCBiR funds more applied research and innovative and strategic R&D projects of business enterprises, NCN funds basic research in Arts, Humanities and Social Sciences, LifeSciences and Physical Sciences and Engineering (Siemieńska et al., 2016a). For this NCN receives a budget of over €280 millions a year (NCN, 2019a). One of the priorities of the NCN is to support and develop the scientific careers of predoctoral and doctoral researchers (NCN, 2020a; Siemieńska et al., 2016a).

NCN has since 2012 developed 11 different types of funding instruments which target researchers at different stages in their career (Siemieńska et al., 2016a). All grants are awarded on the bases of competition. The core funding instrument from NCN is the OPUS, which is a funding instrument open to all researchers. The MAESTRO is the most prestigious funding instrument, targeting the excellent group of scholars (Siemieńska et al., 2016a). The funding instrument selected for study in GRANteD is the SONATA, which addresses emerging junior researchers who received their PhD 2-7 years before submitting the application. SONATA will be described in more detail below. Another funding

⁷⁷ <https://www.vr.se/english/about-us/organisation.html>

⁷⁸ <https://www.vr.se/english/analysis/swedish-research-in-figures/overall-decision-statistics/statistics-2020.html>

⁷⁹ <https://www.vr.se/download/18.6574a0a1775150ec11430/1613046838014/Peer%20review%20handbook%20IPD-NT%202021.pdf>



instrument from the NCN is Sonatina which addresses researchers until 2 years after PhD completion. NCN also has especially designed funding instruments for junior researchers without a PhD degree (Siemieńska et al., 2016a).

NCN also coordinates international programs and funding schemes, among them in cooperation with EU, for example ERA-NET, and with other countries and research funding agencies, for example NORFACE (Siemieńska et al., 2016a).

The office of the NCN is managed by a director, who oversees the completion of the tasks and the financial management, as well as represents NCN to the outside world. The Director also acts as an independent legal representative on behalf of the NCN (NCN, 2020a). The Director is selected in a competition by the Council of the NCN and appointed by the Minister of Science and Higher Education (NCN, 2019a).

The NCN Scientific Council is the major strategical body and the major decision-making body at NCN. The Scientific Council is responsible for designing the rules and regulations. The Council is composed of twenty-four top researchers in Poland and each major discipline is represented. The Council defines the priority areas of basic research in accordance with the state's development strategy, lays down the terms and conditions for calls for research proposals, allocates funding and announces calls for doctoral scholarships and postdoctoral fellowships. It is also the responsibility of the Council to appoint the members of expert teams that evaluate research proposals (NCN, 2020a). In 2019 the Scientific Council was constituted by 11 women and 13 men. The current composition of the Scientific Council is 15 men and 9 women.⁸⁰

The administrative core of the NCN is the NCN Office, consisting of several different divisions and more than ten teams. The members of the office are responsible for providing information for applicants and ongoing support for current calls and organizing expert team meetings. The office also handles the process of signing grant agreements, oversees their implementation, and initiates international funding cooperations (NCN, 2020a).

2.5.5 Slovak Research and Development Agency (SRDA)

The Slovak Research and Development Agency (SRDA) was established in 2005. The Agency is a state-budget institution linked to the State Budget of the Slovak Republic under the Ministry of Education, Science, Research and Sports. The Agency has been established as the state non-profit-making organisation, with an objective to financially support science, research, and development. It is the only national grant agency in Slovakia to support research and development by granting funding from the State Budget to implement the projects in research and development in particular science and technology fields, within the Agency's programmes, and within bilateral or multilateral contracts on

⁸⁰ <https://ncn.gov.pl/en/o-ncn/rada-ncn>



scientific and technological cooperation and projects within the Slovak participation in international programmes of research and development and community programme projects, as well as initiatives of European Union in research and development, including preparation costs.⁸¹

The main objectives of the SRDA are (SRDA, n.d.):

- a) support basic research of superior quality, applied research and development in all science disciplines and technology including support of interdisciplinary and multidisciplinary research based on top quality,
- b) provide development and implementation of new forms of research support in the Slovak Republic considering increase of interaction between basic and applied research and development, and moreover considering an increase of society awareness about importance of research and development,
- c) provide development and implementation of new programs and forms of support in area of international cooperation in research and development, and also support participation of research and development organisations in the Slovak Republic in area of the European programs and research and development initiatives,
- d) support research and development from corresponding funds of the European Union,
- e) provide propagation of research and development results within the Slovak Republic and support deepening of understanding between research and society,
- f) provide statements and analyses within area of competence to central bodies of the state administrative, the National Council of the Slovak Republic and to advisory bodies of the government of the Slovak Republic,
- g) cooperate with the Ministry of Education of the Slovak Republic regarding preparation and implementation of state scientific, research and development policy.
- h) The SRDA funding instruments include General Calls, Programmes, Bilateral Calls and multilateral collaboration.

The Agency has the following bodies: Agency Director, Agency Presidium, and Agency Council. The Agency Director covers activity of the Agency, its Presidium and Council. The Presidium primarily makes decision on the conception and main activities of the Agency and on its programs.⁸² The Agency Council reviews, selects, and approves particularly projects for financial support and subsequently controls solution of supported projects.⁸³ The Agency Director is authorized to issue organisational rules of the Agency that define details on organisational structure of the Agency, competences of organisational departments and their mutual relationships (SRDA, n.d.).⁸⁴

⁸¹ <https://www.apvv.sk/?lang=en>

⁸² https://www.apvv.sk/buxus/generate_page.php?page_id=296

⁸³ <https://www.apvv.sk/agentura/organizacna-struktura/rady-agentury.html>

⁸⁴ <https://www.apvv.sk/buxus/docs/agentura/ine-dokumenty/statute-srda.pdf>



3 GENDER EQUALITY POLICY ANALYSIS OF CORE RFOs

3.1 Gender Equality Policy analysis framework

For the Gender Equality Policy analysis, a framework was developed in WP5 to capture relevant conceptual, organisational, strategic, and operational aspects impacting the design and adoption of the gender equality policy in the core RFOs. These include the national framework discussed in chapter 2, the RFO gender equality policy timeline, framing and overall goals of the gender equality policy, issues addressed by the gender equality policy, organisational responsibility and accountability for implementing the policy, gender equality measures in place, and other aspects which according to research literature may have relevance for gender equality, such as transparency, recruitment of panellists and reviewers, handling conflict of interest and complaint opportunities.

Table 3.1 shows the grid used to map the topics addressed by the five core RFOs gender equality policies. The table demonstrates whether the topic is addressed by the RFO. A more detailed discussion and commentary on the topics will follow in the sections on each of the core RFOs.⁸⁵

Table 3.1. Topics addressed in the core RFOs' gender equality policy

Topic addressed	FWF	SFI	SRC	NCN	SRDA
Gender mainstreaming	✓	✓	✓		
Awareness raising	✓	✓	✓		
Equal representation in decision-making boards	✓	✓	✓		
Equal representation in panels, among reviewers	✓	✓	✓		
Gender balance in research teams	✓	✓			
Broadening the applicant pool	✓	✓	✓		
Prevention of discrimination	(✓)	✓	✓		
Motherhood, parenthood, parenting	✓	✓	✓	✓	✓
Evaluation criteria		✓	✓	✓	✓
Non-biased peer review process	✓	✓	✓	✓	
Equal success rates		✓	✓		
Gender dimension in research content	✓	✓	✓		
Regular monitoring	✓	✓	✓	✓	
Accountability for implementation	✓	✓	✓		
Reporting and follow-up	✓		✓		
Communication & PR	✓	✓	✓		
Role in gender equality promotion broadly in sector	✓	✓	✓		
Intersectionality	✓	✓			
LGBTIQ+		✓			
Other	✓	✓	✓	✓	

Table 3.1 demonstrates that three of the core RFOs apply a gender mainstreaming approach in their policy as their intervention logic, address most of the topics the mapping included in their policy, with some variation, and some other topics not mentioned in the grid, whereas NCN addresses only a few and SRDA only one topic, related to evaluation criteria. Motherhood and parenthood is, in some respect,

⁸⁵ We thank Anne-Charlott Callertstig for valuable feedback in developing the grid.



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Table 3.2 presents the grid used to map the gender equality measures implemented in the five core RFOs, and an overall view on the measures by RFO.⁸⁶

Table 3.2. Gender equality measures in the GRANteD core RFOs

Measure	FWF	SFI	SRC	NCN	SRDA
General GE/diversity strategy	✓	✓	✓		
Detailed GE plan/diversity plan	✓	✓	✓		
Gender equality unit or equivalent	✓	✓	✓	✓	
Gender quotas in panels, among reviewers					
Gender targets in panels and among reviewers	✓	✓	✓		
Active search to recruit female panellists and reviewers	✓	✓	✓		
Academic age instead of biological age for eligibility	✓	✓	✓	✓	(✓)
Parental leave considered for eligibility	✓	✓	✓	✓	✓
Priority to underrepresented gender in case of equal evaluation scores		✓	✓		
Gender equality guidelines for panels and reviewers	✓	✓	✓		
Obligatory GE training for staff and reviewers		✓	✓		
Voluntary GE training for staff and reviewers					
Obligatory gender bias training for staff and reviewers	✓	✓	✓		
Voluntary gender bias training for staff and reviewers	✓				
Gender equality observers in panel meetings			✓		
Evaluation studies of gender equality policies	✓	✓	✓		
Gender statistics collected (general)	✓	✓	✓	✓	✓
Gender statistics on panellists and reviewers collected	✓	✓	✓		
Gender statistics on success rates by discipline, academic age, funding instrument collected	✓	✓	✓	✓	
Time series and follow-up on gender statistics	✓	✓	✓	✓	
Gender statistics made publicly available (on RFO web or Annual Reports etc.)	✓	✓	✓	✓	
Diversity of gender role models used in RFO Communication			✓		
Complaint procedures in place	✓	✓		✓	
Networking and benchmarking with other RFOs on gender equality policies	✓	✓	✓		
Other measures	✓	✓			

Four of the five RFOs have a designated organisational gender equality unit or coordinating group, although the one of NCN a very recent one. Three core RFOs: FWF, SFI and SRC implement a multitude of measures and have an overarching gender equality strategy guiding the policy and measures, whereas the NCN and SRDA do apply only a few such measures, without any overarching gender equality strategy. A common feature is that none of the core RFOs implement gender quotas for decision-making bodies or panels, but gender balance is aimed for rather through targets. All five RFOs collect gender statistics of some kind, but the extent and scope vary, also whether and how this data is made available and published. A more detailed discussion on the measures by RFO will follow in the sections below, focusing on each RFO.

⁸⁶ We thank Anne-Charlott Callertstig for valuable feedback in developing the grid.



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3.2 FWF

3.2.1 Timeline

Already a decade ago, the FWF was included among the proactive RFOs in the EC expert group assessment of gender equality in research funding in Europe (EC 2009). The first time the FWF made resources available (one academic researcher/analyst, one administrative post; 50% each) to grapple in more intense way topics around gender mainstreaming was by 2005, when the organisation set up the Staff Unit for Gender Issues. Initial objectives were defined, and the FWF gender data were analysed.

National and European networking activities regarding gender mainstreaming in the field of research policy were established shortly afterwards. On the national level, a multi-organisation working group, genderAG, was formed, including several funding agencies and research organisations (ACR, CDG, FFG, FWF and JR). The genderAG promotes exchanges and discussions on measures to enhance career opportunities and to promote equal opportunities for women.

On the European level the networking activities of the FWF focuses on the German-Austrian-Swiss region (D-A-CH region), where the FWF could establish strong ties to German research funding organisation DFG and to the Swiss research funding organisation SNF, both actively engaged with gender equality issues. Since 2007 gender has been integrated as a separate item on the agenda of the D-A-CH meetings (FWF, n.d.-a).⁸⁷

Internally, gender mainstreaming was introduced in three of eight principles of the FWF's corporate policy in 2008. Additionally, efforts of the genderAG to raise awareness internally and externally resulted in a gender awareness training seminar in which all employees of the FWF and its decision-making bodies discussed current gender issues in internal and external processes. 2010 a set of standards for equal treatment were adopted based on the corporate policy and additional priorities agreed on. These standards influence the FWF's external work (e.g., research funding & its associated processes) as well as its internal work (e.g., recruiting, remuneration, further training and education, work-life balance, workplace design and areas such as organisational culture). One result of the implementation of these standards was the implementation of the target of 30% women in FWF-funded projects and that gender analyses were made compulsory in the FWF's Flagship Programmes (FWF, n.d.-a).⁸⁸

⁸⁷ <https://www.fwf.ac.at/de/news-presse/news/nachricht/nid/20150310-2111>



The progressing of gender equality work within FWF is evidenced by that in 2010 the FWF implemented a self-reflection process. This process was based on empirical studies analysing the organisation's decision-making processes. Additionally, a bibliometric analysis of FWF funded projects was carried out. External experts were also involved in the reflection process (FWF, n.d-a). The outcome conclusion of this process was that women are not subject to a disadvantage in the peer review process in principle, but that they do have/obtain a somewhat lower success rate, due to multiple factors (e.g., age) and therefore it takes them longer to establish themselves firmly at Austrian research institutions (Fisher & Reckling, 2010).

Finally, since 2013, the FWF has attained a fairly balanced ratio between women and men in its decision-making bodies and in some of them women now are in majority. In 2020 the share of women appointed to the Supervisory Board was 80% and to the Executive Board 60%. The Assembly of Delegates had a share of 38% women and the FWF Board 39,1% (FWF, 2020b).

3.2.2 Framing of gender equality

The FWF indicates Gender Mainstreaming, Equal Opportunities and Transparency and Fairness as three out of eight major values of the organisation. The equal treatment of women and men in research is a top priority at the FWF. The FWF defines gender equality as cross-sectional task by supporting equal opportunities for all researchers “within the national research community by means of fair, transparent processes and the balanced participation of women and men in its decision-making bodies” (FWF, 2018). Furthermore, the FWF Strategy for Gender equality and Diversity of Researchers (2018) states, that balanced participation does not only concern decision-making bodies, but overall functions of the FWF, its decision-making processes (with appropriate checks and balances in order to avoid unconscious bias) and in its programmes, whether as applicants or principal investigators (FWF 2018). However, the FWF supports not only participation of women in the research teams, but also research that includes gender dimension in its research approach (FWF, 2018).

The national and European legal background of the FWF activities regarding gender equality and diversity is based in the following legislations/directives: The legal basis of the FWF activities is the Research and Technology Funding Act (FTFG), which defines, in §2b, one of its duties as being the promotion of scientific and scholarly research projects by any appropriate means for one or several natural or legal persons. Furthermore, the FWF follows the recommendations of the Austrian Research, Technology and Innovation (RTI) Strategy (Österreichische Bundesregierung 2020). It defines several actions in order to promote gender equality in research: 1) gender budgeting in all research funding activities, 2) career development for women in basic and applied RTI young researcher programmes and their field of work and 3) actions to improve the reconciliation of work and family life. Furthermore, the recommendations of the former Federal Ministry of Education, Science and

⁸⁸ Flagship Programmes refer to Special Research Programmes (SFBs) and Doctoral Programmes (DKs).



Research (BMBWF), as the supervisory authority of the FWF, pervades the actions and activities of the FWF regarding gender equality and diversity. They also reflect the three-pronged approach to gender equality in accordance with the gender equality aims of the ERA (European Research Area): 1) Balanced gender ratio in all areas and hierarchical levels; 2) Reduction of structural barriers; 3) Firm establishment of the gender dimension in research and research-oriented teaching (FWF 2018). In addition, FWF strongly supports the outcome of EU reports, which have identified the need to incorporate gender equality policy objectives and their implementation into the organisational strategy. (European Commission, 2021; European Commission, 2016)

As mentioned earlier, the FWF established a Staff Unit for Gender Issues in 2005, which since then undertakes tasks in the field of equal opportunities in research funding. This unit helps the FWF to pursue its objectives and to establish/implement framework conditions needed for its GE policies and measures (FWF, n.d.-b). Furthermore, the implementation of gender equality is anchored high up in the organisation, being one of the primary management responsibilities of the FWF Executive Board (FWF, 2018). In the FWF's corporate policy, gender mainstreaming is stated as one of the main values of the organisation (FWF, n.d.-f): "The equal treatment of women and men in research is a top priority at the FWF, and our organisation pursues this objective through specific programs and gender mainstreaming in all fields."

3.2.3 Goals and aims of the gender equality policy

The goals and aims of the GE policy of the FWF follow, in an overriding sense, the process of gendered innovations described by Schiebinger and Schrauder (2011). It integrates gender analyses into all phases of basic and applied research, thus aiming to ensure excellence and quality in the results.

Since the establishment of the FWF Staff Unit of Gender Issues, the FWF therefore pursues the following objectives (FWF, n.d.-a):

- Ensuring the quality of data captured and identifying links in existing data;
- Increasing the visibility of women in science and research;
- Enhancing and expanding career opportunities for women in science and research;
- Increasing the number of women among principal investigators and in the FWF's decision-making bodies.

Therefore, the aims of the FWF gender equality policy are inspired by the three-folded approach on policymakers, institutions and researchers have already chosen in the past (FWF, n.d.-b): Fixing the numbers – increasing the number of women in the fields of science, research, medicine and technology; Fixing the institutions – improving institutions by dismantling obstacles and changing structures; and fixing the knowledge – completing knowledge by integrating gender analyses into basic and applied research.



3.2.4 *Topics addressed by the gender equality policy*

The FWF policy is based on a gender mainstreaming approach and addresses a wide range of topics across the whole funding process, including awareness raising, equal representation in decision-making panels and among reviewers, gender balance in research teams, gender dimension in research content, non-biased peer review process, evaluation criteria, motherhood and parenthood, regular monitoring and accountability, communication and PR, and the broader role of the FWF in the sector. Intersectionality is mentioned in the FWF's Strategy for Gender Equality and Diversity of Researchers. It is stated that "the diversity of researchers will be considered from an intersectional approach, where necessary" (FWF, 2018). However, the Strategy does not further specify this.

3.2.5 *Gender equality measures in place*

The FWF has a wide spectrum of gender equality measures in place, embedded in the overall gender equality strategy. The FWF has implemented a Strategy for Gender Equality and Diversity of Researchers (2019-2020). An up-date is in progress. An operational gender equality and diversity Action plan is integrated in the Strategy. The organisation has set operational targets of representation of women in the Board and among reviewers. The FWF Action Plan on Gender Equality and Diversity (2019-2020) states that the FWF aims for a target figure of 50% women on the FWF Board (FWF, 2018). In 2020 a share of 39,1% of women on the FWF Board was reached (FWF, 2020b). The FWF aims for a target of at least 30% women among international peer reviewers per year (FWF, 2020). In 2020 the share of women among international peer reviewers was 25,6% (FWF, 2020b).

Academic age is used instead of biological age in assessing eligibility. Longer career breaks, such as parental leave, can be taken up by the applicant, and will be taken into account of the evaluation (see FWF application guidelines). Once a grant is awarded, principal investigators have two options if they wish to take parental leave (FWF, n.d.-e): request a temporary change of principal investigator or request a temporary interruption of the project for the duration of the parental leave. Age limits in the FWF's application requirements for grants and fellowships have been eliminated, and parental leave is now recognised in the calculation of a researcher's academic age. (FWF, n.d.-h).

There is no obligatory gender equality training for panels or staff. Voluntary gender bias training is in early stage of implementation. The FWF only recently (April/May 2021) outlined on their homepage detailed information on unconscious/implicit bias in the decision-making and evaluation process for reviewers and members of the FWF board (FWF, 2021).

Evaluation studies of gender equality policies have also been conducted on the decision-making process from gender perspective (Fischer & Reckling, 2010). Gender statistics is collected and published annually on applications, success rates, decision-making bodies, and reviewers. The FWF publishes annually an analysis concerning applications and success rates among women/men as well as shares of women/men in the FWF bodies and the international peer reviewers (FWF, 2020b). Time series of gender statistics on the period from 2015 until 2020 are publicly available on the FWF website, together with all statistical analysis.⁸⁹



The FWF uses on its website, in its various documents, in its advertisements for FWF Board members, and in its rules of procedure gender-neutral language (FWF, n.d.-a). Both the website and the Annual Report are kept neutral with very few pictures.

The FWF work for gender equality is strengthened by collaborations and exchange with other funding organisations in Austria and in the German-speaking European countries. In 2007 the genderAG was established, a multi-organisation working group including different Austrian RFOs and research organisations. Their aim is to promote exchanges and discussions on measures to enhance career opportunities and to promote equal opportunities for women (FWF, n.d.-d). On the international level the working group D-A-CH between the German Research Foundation (DFG) and the Swiss National Science Fund (SNSF) is an important collaboration forum (FWF, n.d.-a).⁹⁰

3.2.6 Other potentially relevant measures and policies

3.2.6.1 Transparency

The FWF is transparent on its decision-making procedures. Documents describing the evaluation process and procedures are publicly accessible on the website and to the applicants. Furthermore, evaluation criteria are public and available for the candidates. The applicants will be informed in writing of the FWF decision (in form of a decision letter). The letter is accompanied by sections one and two of the overall formal assessment of the reviewers in their entirety and in anonymous form (including the overall ratings). Reviewers are not identified to the applicants. In the third section of the overall formal assessment, reviewers can provide additional, confidential remarks to the FWF (FWF n.d., FWF 2018).

3.2.6.2 Recruitment of panellists

The bodies of the FWF include the Supervisory Board, the Executive Board, the FWF Board and the Assembly of Delegates (see section 2.5.1). The Supervisory Body elects the FWF's President and Vice Presidents; the Assembly of Delegates the FWF Board's reporters, their alternates and four members of the Supervisory Board. The Assembly of Delegates is appointed by the Austrian scientific community: universities, other Austrian research institutions and the supervisory authorities (gender balance needs to be taken in consideration). The FWF Board is responsible for making grant decisions for all the FWF funding (Wysocki 2020).

Currently the FWF Board consists of 31 reporters and their alternates. The selection of reporters and their alternates must ensure a broad spectrum of expertise. Therefore, based on the disciplines which must be covered by the board, calls for the positions of reporters and their alternates are published.

⁸⁹ <https://www.fwf.ac.at/en/about-the-fwf/gender-issues/monitoring-equal-opportunities>

⁹⁰ <https://www.fwf.ac.at/de/news-presse/news/nachricht/nid/20150310-2111>



They especially address leading experts in different disciplines from universities. As already mentioned, the Assembly of Delegates then elects the reporters and their alternates, considering an adequate balance between universities, departments, etc. and gender balance. Reporters and their alternates are recruited for a time-period of three years. The FWF Board comes together five times a year to decide on applications, based on external reviews conducted by international peer reviewers (Wysocki, 2020).

The peer reviewers must come from outside Austria, and should not have been working in Austria for the last 5 years. They must be internationally established experts, currently active in their respective research field. The FWF can nominate them twice per year. On average, there should not be more than 15 % reviewers from Germany/Switzerland per year. The share of women among reviewers should on average be at least 30% per year and a suitable mix of younger and older reviewers is desirable (FWF, 2020a).

The reviewers are suggested in close cooperation between the FWF Office, the reporters and their alternates. The Executive Board decides whether a review procedure has to be initiated and appoints reviewers based on the suggestion of the FWF Office, the FWF Board reporters and their alternates. The minimum number of reviewers per applications depends on the amount of funding requested and the type of funding programme. It varies between one and six reviewers. Applicants have the right to exclude up to three researchers or research groups from the review process. However, they cannot name reviewers for their applications (FWF, 2020a).

3.2.6.3 Conflict of interest

In the whole recruiting process of international reviewers, special attention is paid to avoid any positive or negative conflict of interest (Col). The FWF declares three main cases when Col can be perceived (FWF, 2020a):

Reviewers profit financially or personally from the approval or rejection of the application

Reviewers closely cooperate/cooperated in their daily work with the applicant or have close professional or personal connections to the applicant (e.g. joint publications with less than 20 authors and with the reviewer or the applicant being lead author or last author, represented in committees, work/worked at same research institution, conferences, workshops etc.)

Reviewers have fundamental differences of scientific or scholarly opinion with the applicant(s)

Additionally, the FWF assumes that reviewers will also refrain from assessing applications and notify the FWF in cases which are not explicitly covered by the FWF's rules regarding bias. Also, if any member of the FWF board faces Col with any of the applications discussed in the meeting, the relevant member does not participate in the discussion of the application in question. He/she is required to leave the meeting room while the jury deliberates on the application (FWF, 2020a).



3.2.7 Summary

The FWF overall strategy foregrounds gender equality, which gives the gender equality actions high legitimisation across the organisation. The policy is also strongly informed by the ERA framework on gender equality in research organisations and science. The work on gender equality has been conducted for nearly two decades; it has been in progress from the early 2000s. The gender equality policy of the FWF is based on the principle of gender mainstreaming, addresses comprehensively most of the relevant topics, including gender balance in decision-making bodies, and includes a wide spectrum of gender equality measures. Since 2005, the FWF has an internal support structure for its gender equality activities, the FWF Staff Unit for Gender Issues. Its aims are to ensure a high quality of data, to enhance the visibility of women in science and research, to expand career opportunities of women, while also trying to increase the number of women among principal investigators and in the FWF decision-making bodies. This unit helps the FWF to pursue its objectives and to establish framework conditions needed for its GE policies and measures. Furthermore, the implementation of gender equality is anchored to the highest management, as it is one of the primary management responsibilities of the FWF Executive Board.

The FWF supports not only the adequate participation of women in research teams, but the integration of the gender dimension and intersectional approaches into research. The goals and aims of the gender equality policy of the FWF follow, in an overriding sense, the process of gendered innovations described by Schiebinger and Schrauder (2011), by integrating gender analysis into all phases of basic and applied research.

The Strategy for Gender Equality and Diversity of Researchers implemented in 2019 is currently updated. It includes ambitious aims for a target figure of 50% of women in the FWF board, and 30% of women among international peer reviewers per year. Although the achievement would be accomplished easier with quota regulations for minimum representation of women, the FWF strategy refrains from those measures. In the past years, the FWF reached a fairly balanced ratio in decision-making boards and the gender balance among reviewers also improved. The Strategy for Gender Equality and Diversity of Researcher also mentions the need for intersectional analysis. However, it is not further specified how intersectional approaches are to be implemented in practice. In addition, the promotion of an LGBTQI-Agenda is not mentioned.

To raise awareness for gender-related issues like unconscious bias in decision-making and peer-review processes, the FWF has published guidelines on the homepage, which are updated regularly. Although the inclusion of all researchers is mentioned in the application guidelines, the FWF could address its anti-discrimination policy more clearly. The FWF is performing excellently when it comes to gender statistics. Gender statistics concerning application and success rates in FWF bodies, international peer reviews, and panellists are collected annually and made publicly available.

Active engagement and exchange with national and regional collaboration of RFOs on gender equality in research funding is strengthening further the gender equality policies and activities of FWF.



3.3 SFI

3.3.1 Timeline

In the European Commission expert group's mapping of gender challenges in research funding a decade ago, Science Foundation Ireland came out as one of the proactive RFOs, even though more recently active than some other proactive ones, such as the SRC (European Commission, 2009; Husu & de Cheveigné, 2010). SFI initiated first measures to promote women in science in 2005, primarily targeting researchers returning to active research after a prolonged absence (Fritch et al., 2019).⁹¹ Since 2011, SFI has collected and analysed data on application submission and success rates by gender (Fritch et al., 2019). In 2012, SFI established the so called *SFI Agenda 2020* which was an ambitious plan, with the aim to make Ireland a global knowledge leader. Amongst the targets set by this plan was the endeavour to reach 25% female award holders in STEM. This target was set in relation to the average of 19% in the period of 2008-2012. Since the target 25% was achieved already in 2016, it was revised upwards to a new target of 30% female award holders within SFI's portfolio by 2020 (SFI, 2018; European Commission, 2021b). According to the data on the SFI Gender Dashboard, SFI achieved 35% female award holders in 2018; in 2019 26,6% female award holders; in the period from 2011 until 2018 the share was 27% female award holders.⁹²

SFI has been a leading member of the Science Europe Working Group on Gender and Diversity since it was founded in 2013, collecting and reviewing best practices on how to avoid unconscious bias in peer-review processes (Fritch et al., 2019).⁹³

Between 2014 and 2016, SFI run the *SFI Advance Award Programme* which was exclusively focusing on supporting the career development of women, and specifically targeting women who had taken career breaks for care giving reasons. The particular focus in the programme was to fund research projects involving collaborations between industry and academia and including a formal mentorship program where the successful applicant was paired with both an academic and an industrial mentor (HEA, 2016).

⁹¹ <https://www.sfi.ie/research-news/news/women-girls-science/>

⁹² Data for 2020 and 2021 is not available on the SFI Gender Dashboard at the time of completing this report.

⁹³ *Science Europe* is an association which represents major public organisations that fund or perform excellent, ground-breaking research in Europe. It describes itself as an advocate for science and the scientific community which strives to help build the European Research Area and shape the global scientific agenda. Science Europe has several policy priorities and key action areas in the research policy landscape. One of their priorities is gender and diversity and the organisation produces evaluation reports and practical guides on the subject. The member organisations of Science Europe are also committing to scrutinise their activities against any form of bias, e.g., avoid unconscious bias in peer review processes, monitoring progress towards gender equality, and improve grant management practices. <https://www.scienceeurope.org/about-us/who-we-are/>



Since 2014, SFI has had a maternity allowance available. From November 2014, SFI invited its award holders to apply for a supplemental discretionary allowance to support their SFI funded award when either a Principal Investigator (PI) or a team member funded on an SFI award takes a period of maternity or adoptive leave. With the SFI Agenda 2020, SFI also put several different measures in place to reach the target. One of the most significant of these measures was the maternity policy. In 2019 SFI adopted a new maternity and adoptive policy. The aim of the policy is to provide additional funding during leave for hiring additional staff to help administering the grant during leave or fund the gap between maternity leave benefit and salary (SFI, 2019f).

The new SFI strategy is outlined in the document *Delivering Today. Preparing for Tomorrow. SFI Strategy 2025* (SFI, 2021b). In this strategic document eight main actions are elaborated on. Two of the actions deal with gender. They also set out to publish a comprehensive Equality, Diversity and Inclusion Strategy outlining specific actions and targets for equality, diversity, and inclusion as a follow up to the 2016-2020 strategy.

3.3.2 Framing of gender equality

SFI funds mainly STEM research, where women continue to be in minority in Ireland and globally, and its gender equality policy and measures have been to a large extent focusing on promoting women in STEM. The gender equality policies and measures focus on increasing the participation of women in STEM fields through different types of supporting projects, such as offering networking opportunities for women in STEM and developing a toolkit on unconscious bias for education, and public engagement initiatives (European Commission, 2021a).

On the main SFI website SFI explains that the RFO is committed to removing and mitigating any existing or perceived factors that may limit the participation of women in Science, Technology, Engineering and Mathematics (STEM) careers.

In addition, SFI emphasizes on its website the importance of the sex/gender dimension in research by referring to that it is crucial that knowledge, that has been developed by support from SFI and the Irish Government, benefits all individuals in society, regardless of gender.

The SFI Gender Strategy 2016-2020 set out the agency's roadmap to improve the representation and progression of women in all aspects of STEM careers in Ireland. The strategy document refers to the major national gender equality policy document in the research and HE sector, the Irish Higher Education Agency's National Review of Gender Equality in Irish Higher Education Institutions (HEA, 2016) and that the Strategy is following the recommendations laid out in the review.

Background issues for the strategy highlighted:

Childbearing and caregiving are major determining factors for women leaving competitive STEM careers, but not the only factors; the lack of role models is also frequently cited and as such gender imbalance appears to be self-reinforcing.

The working environment in Research Bodies (RBs) is often perceived as

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unsupportive of female candidates at all levels of seniority.

One of the sharpest declines in the percentages of women represented on the traditional academic research career track occurs between the graduate and tenure-track/permanent position career points (the so-called 'leaky pipeline') (from Ph.D. to tenure-track/permanent position).

The objectives of the strategy are broad, addressing whole funding cycle/pipeline: from schools and students to widening the pool of applicants, awardees, peer reviewers, process (unbiased), leaders, and research content. It is worth noting here how excellence is linked to gender equality and gender in research content.

3.3.3 Goals and aims of the gender equality policy

The aim of the policy is to achieve the following objectives:

- a) To achieve the revised target of 30% female award holders by 2020.
- b) To increase the uptake of STEM subjects by female students at second and third level.
- c) To increase the proportion of women leading major STEM research initiatives in Ireland.
- d) To increase the proportion of women in the Science Foundation Ireland peer-review process.
- e) To ensure that the SFI peer-review process remains unbiased.
- f) To increase excellence in research and impact by requiring Science Foundation Ireland applicants to demonstrate that they have given full consideration to any potential gender dimension in their proposed research.
- g) To increase excellence in research and impact, by continuing to fund meritorious researchers regardless of their gender, while widening the pool of potential applicants.

The strategy consists of three Strands: Strand 1 on gender equality across SFI education and public engagement, Strand 2 on representation of women within SFI funded research and in review panels, and Strand 3 on gender dimension in research.

Strand 1 focuses on gender equality across SFI education and public engagement initiatives, with the aim of increasing the participation and interest of girls in STEM-related activities.

The details provided for this first Strand in the strategy, regarding measures to attract girls to STEM, are not taken up here in this policy analysis in more detail since these are not relevant for the main topic for GRANteD, although it should be acknowledged that these measures can/may in the long run broaden the applicant pool.

More of interest to GRANteD are Strand 2 and 3 of the strategy:

Strand 2 targets female representation within the SFI funded portfolio and SFI review panels.



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Strand 3 aims to ensure that gender perspectives are integrated into the research content of SFI-funded research programmes. Both strands are further developed and described below.

Strand 2 on women's representation in SFI funded projects and SFI review panels includes broad targets. It includes actions targeting institutions, research teams, researchers as parents and caregivers, gender statistics and monitoring, gender as potential ranking criterium, grant management, unconscious bias training of reviewers. Twelve different actions are presented to achieve this aim, and they are grouped into two areas: First, actions to increase the number of women within the Science Foundation Ireland funded portfolio (action i-ix) and second, to increase proportion of women among reviewers.

(i) SFI will provide incentives for the research bodies to submit applications from female researchers to various programmes.

An example of such an incentive is the SFI SIRG programme, where the institutional cap (maximum number allowed for each institution to submit applications) was recently increased from 6 to 12 applications where at least 50% of the applicants were women. Introducing such measures across SFI's programme range would be based on the expectation that the eligible research bodies are working towards the winning of an Athena SWAN Silver Award, where applicable.

(ii) Within three years, require HEIs to have attained an Athena SWAN Bronze Institutional Award to be eligible for funding. Within seven years, Science Foundation Ireland will require HEIs to have attained an Athena SWAN Silver Institutional Award to be eligible for funding.⁹⁴

(iii) Implement progressive measures, such as the Athena SWAN Programme, to achieve gender balance within the SFI Research Centres.

(iv) Develop targeted gender initiatives, informed by annual gender-disaggregated statistics and the monitoring and analysis of the gender-balance of applicants and awardees.

(v) Improve the SFI call documents and programmes, in areas such as eligible costs, time flexibility and eligibility criteria, which would facilitate and/or encourage caregivers to undertake or remain in a STEM research career.

(vi) Set and monitor targets for gender balance in research teams within relevant SFI Programmes, with the aim of ensuring that research teams and PIs are comprised of at least 40% women and at least 40% men.

(vii) Design and implement specific grant management policies to deal with the needs of female researchers during periods of maternity/adoptive leave.

(viii) Consider including gender as a ranking criterion at review stage, in line with practices already established by the European Commission (H2020) and other international funders.

(ix) Provide effective unconscious bias training to all reviewers. All SFI Staff and the SFI Board have already received face-to-face unconscious bias training.

⁹⁴ Within seven years from 2016, i.e., by 2023 [clarification added by the authors of this report].



Second, actions to increase the number of female reviewers within the SFI under Strand 2 of the SFI Gender Strategy means that SFI will:

- (i.) Achieve 40% representation of panellists of each gender (in both sitting and remote panels, and among postal reviewers) by 2020.
- (ii.) Upgrade SFIs online grant management database SESAME to facilitate increased diversity within review panels.
- (iii.) Upgrade SFI IT tools to facilitate the remote participation of panel reviewers who cannot travel, for either family commitments or other impediments such as age or disability.

Strand 3 concerns integrating gender in research and Innovation. The SFI refers to the European research policy, and that both in ERA and Horizon 2020 it has been pointed out that gender perspectives are not a sufficiently integral part of research and innovation, and state how this applies in Ireland as well. Actions under Strand 3 are:

- (i) SFI will request applicants to demonstrate that they have given full consideration to any potential gender aspects in their proposed research programme. Guidance for reviewers and applicants will be developed.
- (ii) SFI will consider making 'gender in research' training for SFI Ireland funded researchers an eligible programme cost.

The responsibilities for gender equality in SFI are placed in the section for Research Policy, which coordinates a diverse selection of policy related areas, including SFI Gender Strategy. The Head of Research Policy at SFI manages policy and governance related areas for SFI's Gender Strategy, Research Integrity etc. The Scientific Programme manager is leading strategic policy development in research policy, equality, diversity, and inclusion for SFI, with expertise in gender in research and innovation funding, equality, diversity, and inclusion, mainstreaming and gender budgeting (cf. Fritch et al., 2019).⁹⁵

3.3.4 Topics addressed by the gender equality policy

The three broad strategy areas structure the topics addressed by the gender equality policy. The topics addressed cover a wide range, addressing awareness raising, broadening the applicant pool, equal representation in panels and among reviewers, gender balance in research teams, non-biased peer review, evaluation criteria, equal success rates, motherhood, grant management considering parental leave, gender dimension in research content, regular monitoring, accountability and reporting, communication and PR, and the role of the SFI in wider scientific community. Intersectionality and LGBTQI+ issues are also addressed in some documents or actions to some extent.

3.3.5 Gender equality measures in place

SFI has a broad range of gender equality measures in place across the funding cycle. These include the overall strategy: SFI has implemented a Strategy for Gender Equality and Diversity of Researchers (2016-2020). This is currently being updated. The SFI Gender Equality Strategy 2019-2020 includes a detailed gender equality plan. It is expected that the new SFI strategy 2025 that is underway (see



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above) will also include a gender equality/diversity plan. Addressing diversity imbalances among the reviewers used by SFI and in SFI staff members is part of the new SFI Strategy 2025. Active search for female reviewers is taking place according to SFI.⁹⁶ Strand 2 of the SFI Gender Strategy 2016-2020 deals with actions to increase the number of female reviewers and achieve 40% of each gender. The actions include upgrading IT tools to facilitate remote participation of panel reviewers who cannot travel for family commitments or other impediments such as age or disability.

Staff has received face-to-face training on unconscious bias, as noted in a report from Science Europe:

[I]n 2016, all SFI staff, including the Executive Committee and the Board of Management, received sector-specific, data-driven unconscious bias training by an external provider. Feedback and learnings from the session have been fed into process improvements within the organisation, such as expanded briefing to peer reviewers and a reconsideration of the information provided to review panels (Science Europe, 2017b, p. 19).

SFI has developed an extensive and comprehensive Reviewer Code of Conduct to maintain and ensure high-quality peer review.⁹⁷ Reviewers engaged by SFI are required to abide by the code of conduct, which consists of a total of 19 paragraphs (SFI, n.d.-d). Paragraph number 19 includes references to gender:

Reviewers must agree to act justly in conducting a review for SFI. A review must be conducted with integrity, impartiality, and confidentiality and without bias on the basis of gender, race, colour, age, disability, national origin, sexual orientation, political or religious affiliation or marital status. Reviewers are requested to review and consider the guidance provided to aid reviewers in the understanding of unconscious bias in the video available on the SFI website.⁹⁸

An intersectional approach is applied in the paragraph above. Furthermore, SFI took part in an Irish network which joined an international team to organise first ever International Day of LGBTQ+People in Science, Technology, Engineering and Maths (STEM) on 5th July, 2019.⁹⁹

Academic age instead of biological age is applied in assessing eligibility. All Frontiers for the Future funding programme applicants are requested to detail any periods of leave from research in their CV - this is considered by reviewers when assessing the track record of applicants. When it comes to considering parental leave, since 2014, SFI has had a maternity allowance available. In 2019, SFI adopted a new policy also including adoption: SFI Maternity/Adoptive Policy, which aims to help in addressing the gender imbalance among SFI award holders and SFI-funded team members. The policy is thus primarily available for women on maternal leave rather than men on paternity leave (SFI, 2019f).

⁹⁵ As reported in GRANteD/SFI kick-off meeting.

⁹⁶ As reported in GRANteD/SFI kick-off meeting.

⁹⁷ <https://www.sfi.ie/funding/sfi-policies-and-guidance/review/>

Evaluation studies of the policy have been conducted at different points in time – before the SFI Gender Policy 2016-2020 and to develop the latest SFI Gender Policy 2025 (SFI, 2018).

General gender statistics have been collected since 2011. Gender statistics of the panellists are collected to follow up the goal to achieve 40% representation of panellists of each gender (in both sitting and remote panels, and among postal reviewers). Since 2018, SFI collects statistics on success rates by funding instrument and gender, and also on the amount of funding granted to women and men. Time series have been collected to follow up goals and targets. Since 2018, the results from the analysis of the SFI Review Process are available online on the SFI webpage, in the so-called Gender Dashboard.¹⁰⁰ The publication of the data and the creation of the dashboard is in support of the SFI's commitment to the transparency of its review process.

SFI engages with other stakeholders in gender equality activities in several different contexts and networks, both nationally and internationally and in projects under the European Union's Horizon 2020 (e.g., in FORGEN). Benchmarking with other Irish RFOs is also made through evaluations by Higher Education Agency.

In accordance with the Employment Act 1998-2015, SFI uses non-discriminatory language in Foundation documents and publications (SFI, 2019). There is also in place a process of checking and approval of the reviews submitted by the virtual panel/remote reviewers. The responsible SFI Scientific Programme Managers check the reviews for formalities regarding scoring etcetera but are also making sure that there is no insulting or defamatory language included (SFI, 2019j).

⁹⁹ <https://www.sfi.ie/research-news/news/international-lgbtq-stem/>

¹⁰⁰ <https://www.sfi.ie/funding/sfi-policies-and-guidance/gender/dashboard/>



3.3.6 *Other potentially relevant measures and policies*

3.3.6.1 *Transparency*

The SFI is transparent on its decision-making processes and procedures, and these are described on its website. SFI also organizes a Webinar via Zoom for applicants, for example for the applicants of the Frontiers for the Future Programme (see below) to provide information and answer questions. The Webinar is recorded and made available on the FFP website shortly after.¹⁰¹ Information on the review process and evaluation procedures are publicly accessible on the website and to applicants.¹⁰² Furthermore, evaluation criteria are public and available for all candidates on the SFI website and in the specific call documents, for the FFP and other funding instruments.¹⁰³ Information on the decision-making and evaluation process is also available for applicants, for example for the FFP (see e.g., SFI, 2019j).

The review process is not double-blind in that evaluators are not identified to the applicants, but the applicants are identified by the evaluators. Evaluation results are disclosed and shared with the applicants, both scores and written evaluation. For some funding instruments, such as the FFP, the applicants also have the possibility to respond to the reviewers' comments at a certain stage in the process. The possibility to make an appeal on the funding decision further contributes to transparency of the funding process (see section 3.3.6.4.).

3.3.6.2 *Recruitment of panellists*

The selection of reviewers (i.e., panellists/members of the virtual panels) is made at the discretion of SFI, involving primarily the programme managers. International panel members are selected with appropriate experience and expertise relevant to the proposals under review and the criteria under which they will be assessed (SFI, 2019j). More information on selection of reviewers is difficult to find in the SFI documents analysed in the GRANteD case study. More information regarding the recruitment of panellists and reviewers will be obtained in the interviews with SFI that GRANteD perform within the Work Package 6. However, one interesting aspect in the process of recruiting reviewers is that SFI enables the applicants to exclude reviewers from reviewing. For example, the applicant of the FFP grant is allowed to add the names of up to three individuals that may be excluded from reviewing the proposal. This is explained to be due to the competitive and confidential nature of the research programme. The information on whether the applicant has used this possibility to exclude reviewers is not made available to reviewers (SFI, 2019j).

3.1.1.1 *Conflict of interest*

The SFI Conflicts of Interests Policy for Staff Members sets out principles for minimizing and managing potential conflicts of interests for individuals involved in decision-making regarding funding (SFI, n.d.-d). The policy is rather extensive and detailed, outlined in a document on six pages and covering areas such as outside activities and income, relationships, and potentially biasing affiliations.

¹⁰¹ <https://www.sfi.ie/funding/funding-calls/frontiers-for-the-future/>

¹⁰² <https://www.sfi.ie/funding/sfi-policies-and-guidance/review/>

¹⁰³ <https://www.sfi.ie/funding/funding-calls/frontiers-for-the-future/>



SFI has also measures in place to deal with Conflict of Interest for reviewers and panel members:

An essential part of ensuring research integrity is managing conflicts of interest that may bias the review of an application. SFI scientific staff are charged with identifying appropriate reviewers and managing reviewer conflicts of interest. Reviewers must agree to certify to a declaration of absence of conflict of interest before conducting a review. If a reviewer is in some way connected with a proposal, or has any other allegiance which impairs or threatens to impair their impartiality with respect to a proposal, they must declare such facts to the responsible SFI staff member(s) as soon as they become aware of this. If a reviewer is unsure as to whether or not a conflict of interest exists, they should consult with the appropriate SFI staff member(s). If a potential conflict of interest arises during the course of a review process, a reviewer must alert the relevant SFI scientific staff member to this and the situation will be managed appropriately.¹⁰⁴

3.1.1.2 Appeals process

SFI has established an appeals process as a complement to the formal process integrated into some of its programmes (e.g., FFP, see below), whereby applicants are invited to provide a scientific response. In programmes where this response stage does not form part of the SFI review process, an appeal may be accepted where specific factual inaccuracies can be clearly identified. Otherwise, appeals must be limited to clearly identifiable issues of procedure.¹⁰⁵¹⁰⁶

Award of SFI funding is discretionary and the appeal process is not an adversarial one. A formal hearing, therefore, is not provided. Factors such as programme budgets and priorities are taken into account when making a decision on an appeal.

The appeal process has three stages: 1) An applicant whose proposal has been declined is encouraged to request more information and explanation from the cognizant SFI Programme Manager or scientific director. 2) Review of the appeal by an SFI director not involved in the original review. 3) Further review by the Director General at the request of the host research body. The decision made by the Director General is final.¹⁰⁷

¹⁰⁴ <https://www.sfi.ie/funding/sfi-policies-and-guidance/review/>

¹⁰⁵ <https://www.sfi.ie/funding/sfi-policies-and-guidance/review/>

¹⁰⁶ Appeals based on applications that have been deemed administratively ineligible, including, but not restricted to, late applications, applications exceeding page limits or missing documentation, will not be considered unless it can be explicitly demonstrated that this resulted from an oversight by SFI. Appeals based on funding levels, or award conditions on applications that have been approved for funding, will not be considered.

3.1.2 Summary

SFI has a comprehensive and ambitious gender equality policy, based on a gender mainstreaming approach, including a clear strategy and a broad palette of measures tapping the full funding cycle. SFI is mainly funding STEM research fields which continue to be male dominated, in Ireland as well as globally. As mentioned above, one of the challenges for SFI is the uneven distribution of applications from female and male applicants, related to the uneven distribution of women and men within the STEM fields. This male domination and women's underrepresentation is informing and framing strongly the SFI gender equality policy and actions.

The commitment to DORA and the implementation of a narrative CV in Frontiers for the Future programme puts the SFI in the forefront globally regarding the development of more multifaceted evaluation of scientific quality and excellence. The evaluation of implementation of narrative CVs should be highly anticipated by other RFOs.

SFI is applying a re-ranking approach in some instruments, such as the Frontiers for the Future Programme: "When ranking applications, in the event of applications receiving the same final score, SFI will give priority in the review process to applications from female candidates" (SFI, 2019a).¹⁰⁸

It is also worth noting and emphasizing that despite the number of male applicants to the SFI programmes is significantly higher than the number of female applicants (approximately within the range of 75%/25%) the gender gap has been nearly closed regarding women's and men's success rates.

Ireland and SFI are pioneering in recent implementation of gender equality related eligibility measures which will impact the whole sector. The eligibility demand from SFI on research performing organisations to have an Athena SWAN Bronze Award is putting pressure on the Irish RPOs to develop a reality where primarily women take parental leave. Nevertheless, it must be considered that it can also contribute to cementing and reproducing traditional gendered roles. Statutory parental leave and statutory paternity leave is however mentioned in the call document for the Frontiers for the Future Programme 2019 and it is there recognized as criteria to be eligible to be reviewed as an "Emerging Investigator" (SFI, 2019a).

On its website, SFI is presenting the different funding instruments in detail, primarily directing the information towards applicants. The only funding instruments where the SFI Gender Strategy is included as one of the headlines is the Frontiers for the Future. It would seem relevant to also mention this for the other funding instruments (encouraging women to apply, for example, referring to the Gender Dashboard, informing about the Maternity/Adoptive Policy).

¹⁰⁷ <https://www.sfi.ie/funding/sfi-policies-and-guidance/review/>

¹⁰⁸ For more information on the Frontiers for the Future Programme, see chapter 5.



The internal gender equality work within the SFI, directed towards staff, is not very visible on the SFI website. The transparency regarding this could be increased. The responsibilities and the organisation and structure of the gender equality work within SFI is not presented in any detail on the SFI website or in the documents. Gender Equality Strategies and Plans should include information on accountabilities and who (individual person or groups and committees) is responsible for implementation, monitoring, and follow-up.

3.2 SRC

3.2.1 *Timeline*

The Swedish Research Council was established in 2001 as a state authority, merging several previous national disciplinary Research Councils. One of the predecessors, the Medical Research Council (MRC), was in international limelight around gender inequality in the end of 1990s. The peer review system used by the MRC was challenged by researchers due to lack of transparency of peer review and of bias against female applicants (Wennerås & Wold, 1997). This led to the resignation of the Council (Jordansson, 2017). In the European Commission expert group mapping of gender challenges in public funding organisations a decade ago (European Commission, 2009) the Swedish Research Council was characterized as among the most proactive European RFOs, with several good practices highlighted. The SRC has since continuously developed further its gender equality activities.

Gender research was explicitly mentioned in the funding framework of the SRC from the very beginning: the SRC had a specific funding programme for gender research, and a Gender Research Committee was set up for this purpose. In the first year, 2001, a total of 9,6 Mill SEK (ca 930 000 €) was awarded to gender research projects (SRC Annual Report, 2001), and gender research did have specific funding category in the SRC budget up to 2012, including funding for three Centres of Excellence in Gender Studies (SRC, 2010).¹⁰⁹

However, it took a few years from the founding of the SRC before more broad and comprehensive activities related to gender equality in research funding were initiated within the organisation. Drivers in this work came from both outside and inside: on the one hand, governmental directives to SRC for gender equality, and on the other, from some staff members and some leaders at the top of the organisation who actively supported gender equality work. The work on gender equality developed further and SRC operationalized more clearly its gender equality goals in 2006.

According to the Swedish Research Council's Instructions Ordinance from the Government (2009:975) 1§14, the SRC must promote equality between women and men within its sphere of activity. In accordance with the requirements established by its government directive, the goals achieved must be presented in the Annual Report of the SRC. Each Annual Report, which are all publicly available on the SRC website (only in Swedish), includes a section on gender equality activities as well as gender statistics concerning the different funding instruments, and a commentary of these¹¹⁰. Since 2013 SRC has been included among the 60 public authorities to which the government has given a gender mainstreaming duty.¹¹¹



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3.2.2 Framing of gender equality

In its gender equality strategy (SRC 2014), the Swedish Research Council defines gender equality in research, first, as a quality issue: "we want to support the best researchers – irrespective of gender". Connected to research quality, the strategy includes a key statement of equal research capacity among women and men: "The Swedish Research Council assumes that research capacity exists to the same extent in both sexes". The framework also includes references to benefits for research of gender equality as well as the justice argument: "Moreover, the Swedish Research Council assumes that research is benefited when both genders participate and apply their expertise and experience". Furthermore, the importance of equal opportunities for conducting research and for equal career development is referred: "Women and men should have equal opportunities to conduct research and develop professional careers as researchers."

Gender mainstreaming is applied as the principal framework. The organisation has two gender equality plans: one regarding research funding, and another on SRC as a governmental agency. This policy analysis focuses on the gender equality plan concerning the role of the SRC as a funding agency.

3.1.1 Goals and aims of the strategy

In the current SRC GE Strategy (2014), the SRC defines the objectives of its gender equality policy more concretely, concerning the composition of the panels, application rates, success rates, gender mainstreaming principle, and communication. According to the Strategy:

The SRC should:

- achieve and maintain an equal gender distribution in its evaluation panels,
- ensure that the percentages of female and male applicants for grants from the Swedish Research Council correspond to the percentages of women and men among the potential research grant applicants,
- ensure that women and men have the same success rates and receive the same average grant amount, taking into account the nature of the research and the type of grant,
- include a gender equality perspective in each analysis and evaluation, where possible,
- integrate a gender equality perspective in the council's external communication.

The strategy also further specifies more concretely these five objectives.

The SRC strategy demonstrates awareness of the importance of continuity and vigilance in gender equality promotion, as a lesson learned from long-term engagement with gender equality actions:

¹⁰⁹ See SRC Annual Reports.

¹¹⁰ <https://www.vr.se/om-vetenskapsradet/organisation/arsredovisningar.html>

¹¹¹ <https://www.jamstalldhetsmyndigheten.se/en/gender-mainstreaming/government-agencies-higher-education-institutions/government-agencies-in-the-gmga-programme-2>



Achieving gender equality throughout the Swedish Research Council's sphere of activity requires a persistent, long-term effort and continuous attention to assure that the ground gained towards equality is not lost. The agency must continually monitor and analyse its activities from an equality perspective and take necessary steps based on the results.

Responsibility for the implementation is clearly defined in the Strategy. The Board has the responsibility for implementation of the Strategy. The objectives require the involvement of the entire agency, including the Scientific Councils and the other councils and committees. The responsibility is anchored to the highest level in the organisation: unless otherwise specified, the Director General is responsible for advancing the efforts towards achieving gender equality. A cross-cutting coordination group for gender mainstreaming is responsible for to obtain an overall perspective on gender equality-related activities and to identify potential synergies and gaps, as well as suggest further measures to strengthen the agency's work on gender equality¹¹². The accountability is described in detail on the SRC website describing the gender equality policy¹¹³:

Every year, the Swedish Research Council's scientific councils, councils and committees report to the Board on the gender equality outcome of the grant decisions, in terms of approval rates and average grant amounts awarded. If there is any regular or significant divergence from the gender equality objectives, the scientific council, council or committee is asked to comment and justify such divergence, and to consider any need for correction.

3.1.2 Topics addressed by the gender equality policy

The SRC gender equality policy has a very broad scope. It addresses awareness raising and communication about the policy, with detailed instructions: according to the Strategy:

Members of the Scientific Councils and the other councils and committees and the members of evaluation panels must be informed about the gender equality strategy of the Swedish Research Council. The evaluation panels shall be instructed in gender equality issues during the information meetings prior to the evaluation work. Other experts involved must also be informed of the strategy (available in Swedish and English).

The gender composition of the applicant pool is constantly monitored, and currently women and men apply in the proportion they are represented in the potential applicant pool; according to the strategy, measures are to be taken if this will change.

Gender balance in decision-making and reviewing is an explicitly stated target, but there is no quota. That all evaluation criteria should be clear and explicit is mentioned in the Strategy, including that the criteria should be published on the SRC website together with guidelines for applicants. Equal success rates are an objective mentioned by the Strategy. Gender dimension in the research content is a more recently added element. Government ordinance from 2018 for SRC included work for including gender dimension in research content if relevant. Partial implementation in medical and educational fields took place 2019 (Evaluation report, n.d.). From 2020 applicants for most funding instruments need to clarify if sex or gender perspective is relevant in their research, and the SRC website gives guidance for



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this.¹¹⁴ Regular monitoring, reviewing and accountability are an explicit part of the policy (see above). Furthermore, external communication is mentioned:

In the Research Council's external communications a gender equality perspective shall be integrated in all communication channels, it should also be clear in relevant contexts that the Swedish Research Council works to attain gender equality. The external image conveyed by the Swedish Research Council should be gender-neutral and not reinforce gender stereotypes of, for example, researchers or subject areas (Strategy, 2014).

Gender balance in research teams and intersectional approaches and non-binary understandings of gender, however, are not addressed in the current policy documents.

3.1.1 Gender equality measures in place

The SRC implements a wide palette of measures to promote gender equality as the comprehensive gender equality strategy based on gender mainstreaming indicates. Gender balance in panels and external experts is a target. Academic age is used instead of biological age as an eligibility criterium, and parental leave and other similar leave is considered when assessing eligibility. For all calls, the SRC publishes a detailed handbook for reviewers, openly accessible on the SRC website. The handbooks, which include review process rules, guidelines, and budgets, as well as general SRC policy documents, including the gender equality strategy and Col regulations, are used by the review panel members in their review work.

As an innovative GE measure, SRC has regularly during the last decade conducted seven gender equality observation studies in the panels and used the results to develop and improve the review process (SRC, 2012; SRC, 2015; SRC, 2017; SRC, 2020). These studies go beyond the narrow focus on success rates for women and men and focus instead on investigating bias in the review process. The results show some progress in the field of gender equality but identify also potential risks and very real risks for gender bias in the review panels (SRC, 2015).

One gender-based pattern pointed out in the observation studies concerns how discussions about women and men are being conducted in the panels. An example of such pattern is how discussions on parental leave and dependence/independence of the applicant took place significantly more often for female applicants than for male applicants (SRC, 2012). A tendency for men panellists to suggest funding for women applicants to a lesser extent than women panellists was also noted (SRC, 2012). During the latest observations, performed in fifteen review panels in 2019, it was noted that the discussions in the panels were characterized by fairness and engagement by the panellists (SRC, 2020). Despite this, observers also documented how different concepts and expressions were used to describe

¹¹² SRC Annual Report 2020 (only available in Swedish).

¹¹³ <https://www.vr.se/english/applying-for-funding/how-applications-are-assessed/gender-equality.html>

¹¹⁴ <https://www.vr.se/english/applying-for-funding/requirements-terms-and-conditions/considering-sex-and-gender-perspectives--in-your-research.html>



women and men, their skills and personal abilities; men being described as “excellent” or “genius” whereas women’s abilities were evaluated more critically and with greater hesitation: “she seems competent...”, “is she really...”, “... she is trying to make an effort...” (SRC, 2020, p. 11-12). This pattern was particularly conspicuous in the panels in the natural and engineering sciences and medicine and health. However, on a more positive note, the use of informal information and rumours about the applicants which previous years been recorded (cf. SRC, 2012), was always interrupted by the SRC personnel or panel chair. Finally, the latest observation study also highlighted that the possibilities for so-called “re-ranking” were rarely discussed. Re-ranking in this context means that applications from the under-represented gender shall be prioritised when several applications are assessed as being of equal quality (SRC, 2020). Based on these observation studies, recommendations have been developed for increasing fairness in the funding process. Several of the recommendations concern increased formalisation of the review process: they consider clarifying, defining, and elaborating the evaluation criteria ‘dependent’/‘independent’ (SRC, 2012); developing procedures for the use of pre-determined seating arrangements to promote a good discussion climate (SRC, 2015); drawing up explicit guidelines for the structure of evaluation meetings (SRC, 2015); considering increasing the activities to encourage more researchers of the under-represented gender to apply (SRC, 2017). Many of these recommendations have been implemented during subsequent years.

Several other evaluation studies have been conducted related more broadly to gender equality in research (see e.g., SRC, 2021a). In December 2021, the SRC listed 17 such studies on its website available in English, and all in all, 41 publications in Swedish (with the search word „jämställdhet“, gender equality in Swedish).¹¹⁵

As a relatively new area, the SRC has started to monitor the gender aspects of the so-called research infrastructure funding and how equally the research infrastructures benefit and are used both by male and female researchers (see SRC Annual Report 2020).

Gender statistics, as mentioned earlier, are a legal demand in Sweden for public organisations since the early 2000s. The SRC regularly collects and publishes gender statistics on applications and success rates and amount of funding granted on all funding calls by discipline, as well as time series. Every year, in the SRC Annual Report, the gender statistics of different funding instruments are included, also by age groups of applicants and awardees. Diversity of role models in SRC communication is mentioned in the Strategy.

¹¹⁵https://www.vr.se/analys/rapporter.html?start=10&end=42&year=all&category=all&query=jämställdhet*&history=true&history=true

The SRC work for gender equality is strengthened by active engagements in collaboration and dialogue with other Swedish stakeholders on gender equality, by coordinating a gender equality network of Swedish public funding organisations, and active participation and key role in the EU network on gender equality and research funding (GENDER-NET Plus ERA-NET) mentioned earlier in section 1.

3.1.1 Other potentially relevant measures and policies

3.1.1.1 Transparency

The transparency of the organisational activities and of the funding process is very high, and most information on the evaluation process and criteria, panel compositions (by name and affiliation), decision-making process, including conflict of interest and gender equality policy, and outcomes of funding decisions is available and openly accessible on the SRC website. The SRC prepares a detailed and extensive peer review handbook for each funding instrument, updated regularly. These handbooks include general guidelines and principles of SRC peer review, SRC conflict of interest policy and guidelines for managing conflict of interest, gender equality policy, SRC ethics principles and guidelines for composition of the panels. For example, for the international postdoc grants in fall 2020, the peer review handbook consisted of 43 pages. All peer review handbooks are openly accessible for reviewers but also applicants on the SRC website, increasing transparency of the process. The Annual Reports are informative and extensive, and report also on the state of gender equality statistics and activities of the year.

3.1.1.2 Recruitment of panellists

The Director General of SRC appoints the chairs and members of the panels following the proposals by the Research Council's Secretaries General. There are detailed guidelines on the composition of panels for each funding call, concerning the number of panellists, the maximum time of service as a member and chair, and the expertise required. Equal gender distribution should be strived for (at least 40% of underrepresented gender), and if this is not achieved, reasons for this need to be justified to the Director General including a list of invited reviewers of underrepresented gender who have declined (See e.g., SRC Guidelines for the composition of the IPD panel, fall 2020).

3.1.1.3 Conflict of interest

SRC has a detailed Conflict of Interest Policy adopted by the Board in 2019 and Guidelines on how to manage conflict of interest.¹¹⁶ The policy and guidelines are included in the reviewer handbooks and are available on the SRC website. The Conflict of Interest policy is based on the Administrative Procedure Act (Förvaltningslagen, SFS 2017:900) which contains provisions regarding conflicts of interest (disqualifications) aimed at guaranteeing the impact of the principle.

According to the policy, all forms of participation in the handling of matters at the SRC shall be characterised by objectivity and impartiality. The SRC shall work actively and continuously to ensure the Council's representatives do not end up in conflicts of interest that may cause the objectivity of the representatives or the trust in the SRC to be questioned. Guidelines for managing conflict of interest should be developed and they are to be followed up and evaluated continuously. All persons representing the SRC need to have good knowledge about the issue of conflict of interest and have



read and understood the conflict of interest policy and the guidelines for managing conflicts of interest. Conflict of interest issues shall be communicated and discussed on an ongoing basis. On accountability, the policy states that the responsibility for ensuring compliance with the policy and the guidelines for managing conflicts of interest lies with the SRC and all who take part in the handling of the Swedish Research Council's matters. This means that the SRC employees, appointed reviewers and elected members shall know and follow the conflict of interest policy and the guidelines for managing conflicts of interest.

3.1.1.1 Complaint possibility

The Swedish Research Council decisions cannot be complained, except in case of withdrawal of funding (Ordinance on SRC 2009:975; para 28).

3.1.2 Summary

The Swedish Research Council is acting in a very research-intensive context in which gender equality has been high on the policy agenda, for several decades, both in society in general as well as in research and academia and in the research funding field. The Governmental Directive to the SRC indicates a gender mainstreaming approach; that the SRC is to take gender equality into account in all its activities. The approach on gender equality has recently been expanded to include gender in research content, according to the Government Ordinance to SRC in 2018. Annual appropriation directions to the SRC from the Government may specify further gender equality activities.

The SRC frames gender equality as a quality issue and the explicitly stated starting point of the gender equality policy is that scientific ability among women and men does not differ. The gender equality strategy includes six clearly defined overarching goals. They concern gender balance in evaluation panels, gender distribution in the applicant pool, equal success rates and equal grant amounts, gender equality perspective in all analysis and evaluations, gender equality in the research content, and integrating gender equality perspective in the SRCs external communication, each with more detailed operationalizations and actions. Issues thus far not addressed in the policy are gender balance in research teams, and intersectional approaches. The SRC collaborates with other Swedish funding agencies as well as at European level on developing further gender equality policies in research funding.

The responsibility for gender equality policy is clearly defined and anchored at the highest level of the organisation, as the General Director carries the overall responsibility. The policy addresses a broad range of issues across the funding cycle. The SRC constantly develops its gender equality activities, using innovative methods, such as gender equality observers, and broadening the gender equality policy focus to now areas, such as infrastructure funding. Transparency is high overall, and accountability includes annual reporting to the Ministry and in Annual Report on gender equality developments as well as a clear internal accountability system concerning gender equality actions.

¹¹⁶ <https://www.vr.se/english/applying-for-funding/how-applications-are-assessed/how-we-avoid-conflicts-of-interest.html>



3.2 NCN

3.2.1 Timeline

The gender equality actions of the NCN are relatively recent. On February 2019 NCN published a statement on equal access of men and women to research funding.¹¹⁷ In the GRANteD kick-off meeting with NCN in October 2021, NCN staff members informed GRANteD that a Gender Equality Plan team had been established within NCN, consisting of office employees and representatives of the Scientific Council. Information on this is, however, not yet available on the NCN public website or in official NCN policy documents.

NCN is currently (in 2021) conducting a major survey on gender equality in academia, to identify major barriers and challenges when applying for funding and developing a research career. Based on this survey a set of solutions will be developed.¹¹⁸

In 2019, proposals submitted by women made up 47% of all applications to NCN. Women were marginally less successful in applying for funding than their male colleagues; the success rates for women and men were 21% and 24% respectively. Of the projects awarded funding in 2019, ca 51% had a male Principal Investigator (NCN, 2019a).

3.1.1 Framing of gender equality

The NCN does not have an overall gender equality strategy or equivalent document. Two types of framings and related goals and aims are, however, visible in other policy documents and regulations. One of these framings concerns acknowledging and compensating career breaks for women/mothers, while the other focuses on a non-biased evaluation process.

3.1.2 Goals and aims of the gender equality policy

NCN acknowledges research career breaks in all funding calls and for all applications, regarding time from PhD degree. Currently, career break of 18 months per child or based on the actual number of maternity leave months is accepted and it is up to the applicant (although only for women) to decide whether they want to apply for the standard 18 months per child or the actual number of maternity leave.¹¹⁹

This period may be extended by a time of long-term (in excess of 90 days) documented sick leave or rehabilitation leave granted on account of being unfit to work. In addition, the period may be extended by the number of months of a childcare leave granted, pursuant to the Labour Code and in the case of women, by 18 months for every child born or adopted, whichever manner of accounting for career breaks is preferable (NCN, 2021a, p. 1, footnote 2). No additional documents are needed for submission to verify this, as NCN indicates that this would create excessive burden on the applicants (NCN, 2021a).

¹¹⁷ Information received by GRANteD team from NCN Staff during kick-off meeting on September 28th, 2021.



The importance of a non-biased evaluation process is stated in the Code of Ethics for Experts of the NCN, where a non-biased review process is described and gender is explicitly mentioned, together with age, nationality, or other aspects of applicants' private life (NCN, 2020c):

When drafting their Reviews, the Experts should comply with the following guidelines: [...] make no references to the age, nationality, gender or any other aspects of the private life of the Principal Investigator in charge of the Proposal, the Principal Investigator or the Investigators (NCN, 2020c, p. 5).

3.1.3 Topics addressed by the gender equality policy

The topics addressed by NCN gender equality activities are restricted to non-biased peer review, eligibility issues, and regular monitoring of success rates by gender and publishing gender data. Regular monitoring of gender disaggregated statistics over applicants and success rates of women and men is communicated in the NCN Annual Reports. Equal representation in decision-making bodies is not mentioned in terms of gender equality in the documents studied for this report, but the key body in the funding process, the Scientific Council of NCN is gender balanced (within 60/40). In the GRANteD kick-off meeting in September 2021, equal representation among reviewers was mentioned as an aim by the NCN.

3.1.4 Gender equality measures in place

As mentioned above, the NCN does not have a gender equality strategy or detailed gender equality plan. Neither quotas nor targets for minimum representation of women or men are set in decision-making or reviewing panels. Academic age instead of biological age is applied for eligibility, and parental leave is considered. NCN acknowledges research career breaks in all funding calls and for all applications, regarding time from PhD degree (for details, see above, 3.6.2) (NCN, 2021a).

Gender equality or unconscious bias training is not offered for staff or reviewers. Non-biased peer review is, however, mentioned in guidelines for experts (for more details, see above, 3.6.2) (NCN, 2020c).¹²⁰ Gender statistics of success rates, including time series, are collected, and made publicly available in Annual Reports (see e.g., NCN, 2019).

¹¹⁸ Information obtained in the GRANteD/NCN kick-off Meeting on September 28th, 2021.

¹¹⁹ https://www.ncn.gov.pl/sites/default/files/pliki/uchwaly-rady/2021/uchwala79_2021-zal1_ang.pdf

¹²⁰ https://www.ncn.gov.pl/sites/default/files/pliki/zarzadzenia-dyrektora/zarzadzenieDyr-104_2020_ang.pdf.

¹²¹ <https://www.ncn.gov.pl/en/ogloszenia/konkursy/SONATA17>



3.1.1 *Other potentially relevant measures and policies*

3.1.1.1 Transparency

All documents concerning not only the call but also those describing the review and evaluation process are available on the website of NCN.¹²¹ As an example of transparency within one funding call, the applicants to the SONATA programme have access to all evaluation material from both stage 1 and stage 2, as well as the final consensus report. In this report the two experts assigned to do the evaluation of the proposal provide information on the autonomous decision and give feedback to the applicant on why the proposal was or was not recommended to be funded (NCN, 2020b).

The evaluation process is single blind, the applicants are identifiable to the reviewers, but it is not possible for the applicants to identify the reviewers. The applicant will be able to read the reviews but will not know the identity of the reviewer. The NCN expert teams will not know the identity of the external reviewers either (NCN, 2020b).

3.1.1.2 Recruitment of panellists and reviewers

NCN does not have a pool of reviewers. The NCN Scientific Council chooses the reviewers for the panel meetings and these reviewers are assigned for only one call: "The Council members shall name the candidates to the Expert Teams and candidates for chairmen of the Expert Teams. An Expert Team evaluating proposals in a call for a research activity shall have no chairman".¹²² The expert teams are formally appointed by the NCN Director.¹²³ There is no information whether gender balance among reviewers is aimed for or whether it is regularly monitored.

The experts can be experts for three calls in a row but after that they need to take a break from the role as expert reviewer.¹²⁴ The external reviewers (for the second stage of reviewing) are suggested by the panel members. These reviewers can be everything from late post docs to advanced researchers.

The process of recruiting the experts is described by NCN in the following manner:

Pursuant to the recommendations of the Council members the scientific coordinators shall contact the candidates to the Expert Teams. If a candidate refuses to work in an Expert Team, the Council members shall suggest a new candidate until such time as the Expert Team is complete.¹²⁵

In Stage II of the evaluation, international external experts are used, who are chosen following the recommendations of the members of the expert teams.¹²⁶

¹²² https://www.ncn.gov.pl/sites/default/files/pliki/uchwaly-rady/2021/uchwala23_2021-zal1_ang.pdf

¹²³ https://www.ncn.gov.pl/sites/default/files/pliki/zarzadzenia-dyrektora/zarzadzenieDyr-55_2021_ang.pdf

¹²⁴ https://www.ncn.gov.pl/sites/default/files/pliki/uchwaly-rady/2021/uchwala23_2021-zal1_ang.pdf

¹²⁵ https://www.ncn.gov.pl/sites/default/files/pliki/uchwaly-rady/2021/uchwala23_2021-zal1_ang.pdf

¹²⁶ <https://www.ncn.gov.pl/en/finansowanie-nauki/dla-ekspertow>



In 2019, 1648 expert team members were appointed who reviewed a total number of 10771 proposals at the first stage of evaluation. Members of the expert team appointed in year 2019 included 243 researchers affiliated abroad, comprising 15% of all experts appointed. 8112 external experts participated in the second stage of evaluation, delivering 9886 of reviews. 96% of them were foreign experts who delivered 9464 evaluations (NCN, 2020a). These 1648 reviewers took part in a total of 91 expert teams (NCN, 2019). For SONATA, 35 panel teams took part in the review process (NCN, 2019).

The majority of the external reviewers were from the USA (1177), the United Kingdom (858), Germany (704), Italy (606), France (487) and Spain (447).¹²⁷

3.1.1.3 Conflict of Interest

NCN includes among their documents for reviewers and experts a document “Code of Ethics for Experts of the National Science Centre” (NCN, 2020c). The document primarily concerns Confidentiality and Conflict of Interest with the Applicant, Principal Investigator, or Investigators and if their impartiality in anyway is in jeopardy.

NCN also includes among the documents for the applicants a 20 pages long document called “The Code of the National Science Centre on Research Integrity and Applying for Research Funding”. The document is an Annex, no 1 to Resolution No 39/2016 of the NCN Council of 11 May, 2016 (NCN, 2016). The document outlines guidelines on research integrity and research misconduct. It includes references to supervisors and mentors, conflicts of interest, collaborative research etcetera. It does contain two references to bias, in the context of research and the researcher:

When planning research, researcher must scrutinize whether the fact of proving or disproving the hypotheses presented in the research will contribute to the development of a specific area or allow to develop new research methods. It is also essential to consider whether the research plan allows for finding an answer to the question posed and, most importantly, whether it is free from a biased approach. (NCN, 2016, p. 6)

Responsible conduct of research includes disclosure of all potential conflicts of interest. This allows financial or other interests to be assessed on an informed basis in order to evaluate possible bias of professional judgment. (NCN, 2016, p. 12)

However, the guidelines do not refer to gender equality or gender bias.

¹²⁷ https://ncn.gov.pl/sites/default/files/obrazki/reviewers_NCN_2019_map.png

¹²⁸ <https://www.ncn.gov.pl/en/finansowanie-nauki/informacje-dla-wnioskodawcow/instrukcja-odwolania>

¹²⁹ <https://www.ncn.gov.pl/en/finansowanie-nauki/informacje-dla-wnioskodawcow/instrukcja-odwolania>



3.1.1.1 Possibility to appeal

There are possibilities for appeal for not funded applications (within, e.g., the SONATA programme). The guidelines for appealing against the NCN Director's decisions are available on the NCN website.¹²⁸

The grounds for the appeal should be a breach of the call procedure or other formal infringements. One ground for such appeal can be gender bias. The appeal must be submitted within 14 days of the date the decision was served. The Committee of Appeals of the NCN Council shall decide on the appeal within three months of the date on which it was submitted.¹²⁹

In 2019 NCN Appeal Committee considered 176 appeals. In 34 cases additional inquiries were required and in 22 cases the Director's decision was annulled and the proposals were submitted for re-evaluation. As a result of the appeals process 23 projects were granted additional funding. (NCN, 2019, p. 36). The proposals qualified for financing (a total of 113 proposals) by the Appeal Committee of the NCN Council in calls concluded between 2017-2021 are posted separately on the NCN website.¹³⁰

3.1.2 Summary

The NCN has become relatively recently engaged with gender equality actions. Initially, displaying a promising commitment to collect disaggregated gender statistics and disseminate them in a transparent manner. They also have a couple of gender equality measures already in place. From a gender equality and gender bias perspective the strengths of the NCN include the even application rate and success rate for many of the NCN funding instruments (including the SONATA which will be discussed in more detail in section 4 of this report). It is also noteworthy that the NCN Scientific Council is gender balanced and has been so for a couple of years. Gender balance in the expert teams is also a topic discussed in NCN, but there is no explicit or formal policy on this yet. Whenever possible gender balance is strived for.¹³¹ Furthermore, the Coordinators have been given an important role and responsibility to ensure a non- biased review process.

The policy analysis performed for this deliverable has not included a systematic investigation of visual content, such as photos and pictures included in the data. But also in this aspect, it is possible to apply a gender lens or approach. Previous studies have highlighted a tendency to overrepresent men in illustrations of scientists and protagonists of knowledge, information, and science (cf. e.g., González et al., 2017). However, it is noteworthy that on the NCN website, women researchers and women Principal Investigators are given prominent positions in public documents published, and same applies to the NCN marketing material and communications between NCN and the public. One example of this are the NCN Annual Reports where photos of women and men are evenly distributed throughout the publication. This gender balance approach, to ensure a gender equal distribution of women and men in illustrations, communications, and marketing material, is also demonstrated in relation to communications to NCN experts and reviewers (for example in the video: "Guidelines for NCN experts", NCN 2020b)¹³².

The engagement with gender equality is in an early stage, and there is room for improvements for NCN. One of the main weaknesses identified in this policy analysis is the lack of overall gender equality strategy and a more detailed Gender Equality Plan, with clear aims and operationalization. Despite the



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even application rate and success rate for many of the NCN funding instruments there are also some examples of more uneven application rate and success rate, most notable for the more prestigious NCN funding instruments (primarily MAESTRO, but also OPUS). There is also an uneven distribution of the NCN awards to women and men that should be addressed.

¹³⁰ <https://www.ncn.gov.pl/konkursy/wyniki/odwolania>

¹³¹ Information shared by NCN with GRANteD during kick-off meeting on September 28th, 2021.

¹³² <https://www.youtube.com/watch?v=xoBxwLsalK8>



3.2 SRDA

3.2.1 Timeline, framework, goals and aims of GE policy

The SRDA belongs to the European research funding organisations which, thus far, have not addressed gender equality in its overall strategy and actions. There is no gender equality strategy or explicit policy, no guidelines on gender balance or code of conduct in decision-making bodies or among reviewers. In the kick-off meeting with the GRANteD team the SRDA representatives explained that gender issues have not been considered as a problem within the organisation thus far. The framework for actions related to gender equality is thus fragmented and focusing on eligibility and evaluation of applicants considering parenthood and age and collecting basic data on applicants and awards by gender (as described in more detail below).

3.2.2 Topics addressed by the gender equality policy and gender equality measures in place

As the only gender-related or gender-marked topic, the guidelines for the reviewers indicate that for assessing merits in two criteria: professional qualifications of the PI (0-20 points), and professional qualifications of the research team (0-10 points), “the reviews and the Council shall consider the age and length of the professional career of the Principal Investigator and team members, as well as maternity/paternity and parental leave.” The maximum points an application can be given is 100 points (SRDA Guidelines for the reviewers). The SRDA collects statistics on the sex of the applicants and success rates. However, the success rates by gender are not made public; in the annual reports the SRDA publishes on its websites none of the statistics is by gender, but by Slovak regions, by character of research (basic, applied, development), by field of science (natural, technical, medical, agricultural, social sciences and humanities).

3.2.3 Summary

The SRDA has not developed a gender equality strategy thus far and does not include gender equality goals in their more general policy documents. Currently gender equality is addressed in only two focus areas, parenthood and age related to assessing professional qualifications, and collecting gender statistics. The SRDA staff in the kick-off meeting with the GRANteD team indicated that the organisation is interested in proposals for future actions, and in engaging in international collaboration in the area, provided by, among others, by participation in GRANteD and its stakeholder activities.



4 OVERALL GENDER BIAS RISK ANALYSIS IN CORE RFOS

4.1 Bias and impartiality

Gender bias is a complex and contested concept. In research and in policy debate it is used both in a narrow and a broader meaning. A narrow meaning of gender bias refers to bias in the evaluation of quality, and here especially the concept of implicit or unconscious bias has caught a lot of attention in recent years in society, academia and in research funding as well as policy development (see e.g., US National Academies of Science, 2006; Easterly & Ricard, 2011; European Commission, 2017; LERU, 2018; GenPORT n.a.; Gvozdanović & Maes, 2018; Jackson et al., 2014; Pritlove et al., 2019; Régner et al., 2019; Storage et al., 2020). A broader approach to gender bias is informed by a very large research literature on gendered organisations, including research organisations, which has analysed multiple and complex aspects of gender relations in organisations (see Bendl et al., 2015; Collinson & Hearn, 1996; Ely et al., 2003; Gröschl, 2011; Jeanes et al., 2011; Kumra et al., 2004; Özgilbin, 2009; and the international scientific journals *Gender, Work, and Organization*, 1994–; *Gender and Management* (formerly *Women and Management*, 1981–; and *Equality Diversity and Inclusion* (formerly *Equal Opportunities International*, 1981 –). Moreover, understandings of the very concept of gender have become more complex and contested in research and knowledge production over recent decades (Hearn & Husu, 2011; Schiebinger & Schraudner, 2011; Gibney & Schiebinger, 2020).

In the GRANteD literature review, in the early stage of the project, Cruz-Castro & Sanz-Menéndez (2019) shed light on the narrower understanding of individual cognitive bias, specifically in the field of gender disparities in grant allocation. They elaborate further on the definition and understanding of bias in peer review, that: “reviewer’s bias is understood as the violation of impartiality in the evaluation of a submission or application” (Cruz-Castro & Sanz-Menéndez, 2019, p. 9). Much previous research has highlighted the influence of this type of bias on the peer review process in academia and in RFOs. Studies have demonstrated how men and women are judged differently and how women’s merits may be undervalued and men’s merits inflated (Rossiter, 1993; Steinpreis et al., 1999; Moss-Raccusin et al., 2012; Handley et al., 2015; Jappelli et al. 2015; Leslie et al., 2015; MacNeil et al., 2015).

Cruz-Castro & Sanz-Menéndez (2019) emphasise the importance of trying to take bias “out of the exclusive level of individuals (researchers, evaluators) and to incorporate the organisational level into the analysis” (Cruz-Castro & Sanz-Menéndez, 2019, p. 11). This is also the broader, organisational perspective that is adopted in this report and that the analysis continue to build on to explore gender equality policies in funding organisations and in their contexts, and how these policies impact their funding processes and the potential risks for gender bias.



4.2 Gender bias – a broader organisational perspective

This report frames bias and gender bias from a contextual and organisational perspective, rather than focusing on an individual perspective. Furthermore, our perspective acknowledges gender bias in knowledge production, which has been increasingly addressed both in research and policy, including funding organisations, in Europe and beyond (see, e.g., Håkansson & Sand, 2021; Gendered Innovations, n.d.). The focus in this report is thus only indirectly on individual cognitive bias, but instead beyond the individual level. The report explores the broader organisational context, structures and processes which may either allow or ignore risk of bias, or prevent, question, suppress, and diminish the effects of individual, cognitive bias. The analysis does not directly explore the cognitive and evaluative, individual bias, but the potential risks that the contexts of RFOs; their legislative or governmental remit, their policies, their decision-making, and their administrative processes, facilitate or allow for these biases to influence the funding process. Gender imbalance in decision-making positions, among reviewers and applicants can be a result of gender bias in recognizing and defining competence, leadership capacity and expertise; gender imbalances in success rates can be due to gender bias in applicant support or narrow definition of eligibility. Gender imbalances are thus not always due to gender bias, but gender bias can in many ways lead to gender imbalances, for example by self-selection bias. Self-selection can impact who decides to apply for funding, which in turn can be influenced by several factors, among them who is encouraged to apply, how the call is written and who is addressed in it, directly (via eligibility criteria) and indirectly (through e.g., gendered language) (cf. Cruz-Castro & Sanz-Menéndez, 2019; Neufeld & Hornbostel, 2012). More specifically, this report focuses on how gender bias and the biasing impact of gender beliefs, and especially gender bias in assessment of quality and capacity (as a micro-level phenomenon) can be counteracted by formal national and organizational policies, and how the risk for gender bias can be mitigated and minimized in organisations (RFOs) (as a meso-level phenomenon).

The perspective on bias, and on potential gender bias risk adopted in this report, is, however, broader and includes additional dimensions. This broader understanding of gender bias includes considerations of the larger societal context, organisational setups and policies which contribute to gendered outcomes in terms of positions, awards, and knowledge. In this broader understanding, contexts and structures in which quality, expertise and knowledge is evaluated can be gender biased, as well as policies and practices related to how evaluations are organised, and how resources are allocated. Silence and lack of action on gender can also indicate gender bias or may lead to biased outcomes.

A recent example of such a broad understanding of bias in the field of policy development is exemplified by the ERAC Standing Working Group on Gender in Research and Innovation policy brief with the title: “Tackling gender bias in research evaluation: Recommendations for action for EU Member States” (ERAC, 2019, p.2), in which it is stated:



Several Member States and European RFOs as well as the European Commission have taken important strides to eliminate gender bias in their procedures and policies, and serve as positive examples for action. ERA National Action Plans and Strategies (NAPS) rarely address the topic. Based on an exchange at its second meeting, the Standing Working Group on Gender in Research and Innovation presents recommendations for national authorities and RFOs on gender bias, to move forward on ERA Priority 4 Gender equality and gender mainstreaming.

The report provides examples of this broader understanding of gender bias in research, focusing on procedures, policies, and processes. One such example of gender bias in organisational processes and procedures concerns how not addressing gender and applying gender-blind, or purportedly gender-neutral, rules disadvantage parents and primary caregivers in various ways across the funding process:

Evaluation and eligibility criteria often disregard parenthood as a potentiality in researcher's lives. RFOs may not address differences in research performance due to family-related breaks. Eligibility rules for junior researchers may set age limits that prevent parents that have taken breaks from participating. For example, having an age limit of 35 without provisions for family-related breaks will tend to bar women from participating. RFOs also may not have rules for the transfer of the PI status after returning from maternity/parental leave (ERAC, 2019, p. 4).

Another example of this broader understanding of gender bias is related to resource allocation and to so-called excellence funding, as pointed out already in the EU Gender Challenge Report in 2009 (EC, 2009), and the very notion of excellence (see, e.g., EC, 2004; Rees, 2011). Increasingly, the RFOs promote funding for so-called 'excellence-programmes' or 'excellence-marked positions'. Although these are usually presented in gender-neutral terms, notions of excellence are gendered and these programmes in general benefit men. A large body of international studies has provided additional support for the existing gender bias in the notion of excellence and the organisational procedures, processes, and policies behind excellence programmes and excellence funding, for example, in Sweden (Sandström et al., 2010), and Ireland and the UK (O'Connor & Barnard, 2021).

4.3 Gender bias risk analysis framework

Applying a broader, organisational approach to gender bias means that potential risks of gender bias similarly must be identified with this broader approach in mind. Gender bias understood from an organisational perspective means that risk areas for gender biased decisions, actions and evaluations are not limited to only a few phases of the research funding cycle, such as when individual reviewers conduct a review of research quality. Instead, gender bias risks are potentially inherent to the process and present challenges for each phase, necessitating caution, awareness, and strategies throughout the process. One such strategy is to use a gender bias risk analysis tool which facilitate identifying potential risks.



Tools for risk assessment usually take the form of checklists, with the items on the lists divided up into areas, identified through careful and systematic reviews of empirical evidence and examples. Each area is then further developed by distinguishing a set of criteria for assessing potential bias risks and for identifying possible strategies for minimising bias in each area. This is the method that was used to develop the GRANteD assessment tool for identifying potential gender bias risks in the research funding cycle. Risk assessments often include a dimension of evaluating the weight of the different variables included in the risk analysis. This dimension is not included in the GRANteD assessment tool for identifying potential gender bias risk in the research funding cycle (see below Table 4.1). The reason for this is the heuristic approach used to develop the tool, aiming to present a practical method for identifying risks by the RFOs themselves. The assessment of the risks in each RFO is however discussed in terms of considerable and substantial risk or relatively high risk, in the subsequent discussions of each RFO (see below 4.5-4.10).

The potential, or emerging, gender bias risk factors in research funding can be identified both in the general set-up and characteristics of the management and organisation of the RFO in question, as well as in call-specific characteristics and regulations. Potential gender bias risk areas include a broad range of structural features, practices and activities in which research funding is applied for and distributed: from overall strategy, structure of the funding process, eligibility, evaluation criteria, transparency, language, communication, and imagery, to accountability and monitoring.

Gender bias risk factors are thus not exclusively about whether gender equality policies are in place or whether and how effectively they are being implemented. Despite these being key dimensions to investigate here, a broader lens must be applied to consider also other relevant discursive, institutional, structural, and contextual factors, such as transparency. The quality of gender equality policies needs also to be reflected upon (Krizsan & Lombardo, 2013). How gender equality is framed and understood is also a dimension which can affect gender bias risk (Meyerson & Kolb, 2000; Husu & Hearn, 2011; Peterson & Jordansson, 2021). A recent global survey of 30 RFOs revealed how in the funding organisations, a multitude of understandings of gender existed, and how the RFOs were faced with challenges with defining gender equality and distinguishing gender equality from the gender dimension in research (Håkansson & Sand, 2021).

The broader gender bias risk areas in research funding were foregrounded already in the 2009 Gender Challenge Report, and detailed recommendations to RFOs and the sector were presented (EC, 2009). The GENDER-NET Plus recent report on gender equality in research funding in 11 European countries, Israel and Canada noted how many of the 2009 report recommendations are still quite relevant, despite increased gender equality actions of RFOs in Europe (Hermansson et al., 2021, p. 73).

In the following we present key gender bias risk areas included in the gender bias risk analysis framework developed in GRANteD. A total of seven such areas were identified: Strategy; Structure; Communication and Language; Criteria (evaluation, eligibility); Transparency; Accountability; and Monitoring. Each area is constituted by several different factors. These areas are separated for analytical clarity but are in practice heavily interconnected.



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4.3.1 *Strategy*

The potential gender bias risk area Strategy includes considerations of whether gender equality policies, plans and strategies exist in RFOs, and which aims and goals they include. This is also an overarching issue, underlined in the European Commission Gender Challenge Report (European Commission, 2009), GenderNet Plus ERA-NET review (Hermansson et al., 2021) as well as the ERAC SWG RI recommendations (ERAC, 2019). The lack of organised, formalised Gender Equality Plans or Gender Equality Policies thus presents a risk in RFOs. If measures, activities, and procedures are only informal and unofficial, this presents a risk as they can be disregarded or overlooked without any formal sanctions or accountability (cf., e.g., Lee et al., 2010).

4.3.2 *Structure*

The second potential gender bias risk area identified for the framework concerns Structure, and factors highlighting the funding process with regards to composition of decision-making bodies as well as review panels, and whether they are gender balanced or not.

A key dimension of the structure of the review process is gender balance in decision-making groups and in review panels, as recommended by the European Commission Gender Challenge report (2009) and the GENDER-NET Plus review (Hermansson et al., 2021). This is also commented on in the ERAC SWG RI report, in which it is recommended that RFOs: “[...] should be required to introduce at least a 40:60 male-female rule as a minimum on evaluation panels” (ERAC, 2019, p. 7).

Van den Brink and Benschop (2012, p. 522) similarly emphasised already a decade ago the importance of gender balance: “To come to better assessment of individual qualifications and to increase the intersubjectivity in the assessment of candidates, it is important to have gender balanced committees”.

4.3.3 *Communication and language*

The third potential gender bias risk area identified for the framework concerns Communication and language. The SWG RI ERAC report (2019) includes among the recommendations for action by national authorities and RFOs, to achieve gender bias-free peer review processes, that the language of call texts should be gender proofed. The reason for this recommendation is explained:

Language is important and in more competitive, highly prestigious competitions women may be reluctant to apply. Before launching a call for proposals RFO staff should gender-proof language (ERAC, 2019, p. 8).

4.3.4 *Criteria and eligibility*

The fourth potential gender bias risk area identified for the framework concerns Criteria and eligibility. To eliminate gender bias in the review process it is key that: “[...] evaluation criteria should be checked to eliminate any direct or indirect rules that may disadvantage a particular group of applicants” (ERAC, 2019, p. 7). It is also important for RFOs to include gender bias training for staff and evaluators, and they should be required to:



[...] train their staff (using support material such as videos and online tutorials), particularly programme managers, as well as evaluators and chairs of evaluation panels especially, to raise awareness about the issue and its impact on the peer review process. Attention is to be paid to building a common understanding around key terms (e.g., leadership, merit) and that evaluators accept the instructions and guidelines underpinning the evaluation process (ERAC, 2019, p. 7).

4.3.5 *Transparency*

Transparency was identified as the fifth potential gender bias risk area in the framework developed. Transparency may appear as a seemingly general, non-gendered notion. However, as van den Brink et al. (2010, p. 1) note: “the call for more transparent procedures and more accountable decision-makers has its origins in gender research: women would benefit from more open and transparent procedures, since (gender) bias is more likely to occur when assessments are based on obscure criteria and the process of evaluation kept confidential”. They also state that: “calls of gender researchers have largely been integrated into policies of universities, and transparency and accountability have been advocated as key instruments with which to promote gender equality”.

The GenderNet Plus recommendations include a section on “generally improving transparency” as one key focus areas on how to improve gender equality in research funding. This includes: making evaluation procedures, criteria and results public; explicit procedures and criteria for recruiting evaluators and reviewers and making them public; using more international evaluators; effective procedures in preventing conflict of interest, unethical behaviour and any form of discrimination in decision-making and peer reviewers and making them public; integrating gender perspective in codes of conduct for all involved in funding decision; and that applicants should receive extensive evaluation feedback in writing (Hermansson et al., 2021, p. 76).

4.3.6 *Accountability*

Accountability is strongly connected with transparency. Accountability matters constitute a key dimension for preventing gender bias risk. This concerns both the accountability of gender equality actions and their results inside the RFOs as well as more broadly. The ERAC report (2019) asserts:

Research Funding Organisations must be accountable to the responsible state administration body for reporting on actions and measures developed and implemented, including statistical information and explanation of disparities between women and men in application and success rates (ERAC, 2019, p. 8).

4.3.7 *Monitoring*

Gender statistics on the RFO and the whole funding cycle are a fundamental precondition for informed gender equality policy and action. Monitoring by collecting and publishing statistical data on the proportion of women and men among reviewers, applicants and grant recipients is necessary to ensure that gender disparities are identified and can be addressed. This type of monitoring should also include statistical information on the proportion of women and men on evaluation panels and among



evaluators and reviewers. Time series are important to monitor development. The information should be made public (see above on “Transparency”), for example in annual reports, and identified gender disparities: “should require an explanation as part of reporting through chains of accountability” (see above on “Accountability”) (ERAC, 2019, p. 7). Monitoring can, however, also include more qualitative tools for assessing efficiency and fairness of organisational processes via interviews and observations (cf. Dahmen-Adkins & Peterson, 2019).

4.4 A heuristic tool

The grid presented in Table 4.1. is suggested by GRANted as a heuristic tool for RFOs for mapping and identifying potential gender bias risk factors and areas at the organisational RFO level. The data used to fill the grid for the five core RFOs is based on the WP5 mapping of gender equality policies and other relevant measures. A tick in the box means there is a risk for gender bias. By using and applying this grid and checklist, any RFO can critically review its policies, procedures, and practices, to identify policy gaps and areas which need closer attention and action to diminish and mitigate risk for gender bias.

Table 4.1. Potential gender bias risk areas and factors in Research Funding Organisations

	FWF	SFI	SRC	NCN	SRDA
STRATEGY					
RFO has no GE strategy				✓	✓
GE aims and goals vague and/or general				✓	✓
RFO has no operational GE action plan				✓	✓
Accountability of GE actions within RFO not defined				✓	✓
STRUCTURE					
Funding process vaguely structured					
Decision-making bodies not gender balanced					
Panels/reviewers not gender balanced	✓	✓	✓	✓	✓
No active search for female panellists/reviewers				✓	✓
COMMUNICATION & LANGUAGE					
GE policy not visible on the RFO website				✓	✓
Call texts language not gender sensitive					
Call texts do not mention GE policy				✓	✓
Gender stereotypes in visual material on web & call doc.					
CRITERIA (Evaluation, Eligibility)					
Evaluation criteria & their weight not clearly defined					
Ambiguous criteria included					
Eligibility criteria do not take into account parental leave					
Biological age used instead of academic age					
Gender dimension in research content not addressed				✓	✓
Guidelines for panellists/ reviewers do not address GE and unconscious bias					✓
No GE training for panellists and/or reviewers				✓	✓
TRANSPARENCY					
No training sessions for applicants					
No detailed guidelines on the funding process for panellists/reviewers					
No codes of conduct for panellists/reviewers					
Col policy without implementation guidelines					

Evaluation, decision-making information and feedback not available to applicants					
No appeal/complaint process			✓		
ACCOUNTABILITY					
Accountability for GE policy low in the hierarchy				✓	✓
GE not addressed in the RFO Annual Reports					✓
No reporting demand on GE to Ministry/national authority				✓	✓
MONITORING					
No gender data collected on applications					
Gender data on applications not monitored					✓
Gender data on success rates not collected nor monitored					✓
Gender data on panellists/reviewers not collected nor Monitored				✓	✓
Gender data collected but not published					✓
No time series collected on gender data					✓

4.5 FWF

The FWF strategy and gender equality policy address comprehensively all risk areas of the risk grid 4.1., and has several counteracting measures in place, with an overall gender equality strategy, structures and plan, including awareness raising, gender balance in decision-making, eligibility rules taking into account family related and other career breaks, high transparency, accountability, gender data collection and availability, taking into account gender in research content, as well as implementing several specific measures targeting the whole funding cycle, from application phase to evaluation and decision-making, project phase (child care benefits), and the post-grant phase (including mentoring as requirement of the grant). The FWF has previously addressed explicitly women's underrepresentation in research through targeted programmes and awards, currently integrating promotion of women into general calls such as the instrument discussed in detail in section 5. Despite the comprehensive measures described above; gender bias can occur in the peer review evaluation of quality of the applications. The overall risk of gender bias in FWF is, however, assessed as low.



4.6 SFI

The SFI gender equality policy and measures address comprehensively all risk areas of the risk grid 4.1 and include several measures to counteract the risk of gender bias across the funding process. The gender equality policy is comprehensive and ambitious and based on a gender mainstreaming approach, including a clear strategy and a broad palette of measures tapping the full funding cycle. By requiring that the RPOs have gender equality plans and are Athena Swan Bronze Award holders, SFI also addresses gender-specific application behaviour affected by the cultures and structures in RPOs. The SFI funds research in STEM areas, where proportion of women researchers is lowest of all main disciplinary fields, and the explicit aim of the SFI gender equality strategy is to improve the gender balance among STEM researchers and leaders. The commitment to DORA and the implementation of a narrative CV in Frontiers for the Future programme puts the SFI in the forefront globally, regarding the development of evaluation of scientific quality and excellence. However, despite comprehensive gender equality measures and strategies, gender bias can occur in the different stages in the funding cycle, including peer review of the funding applications. Notwithstanding, overall, considering all measures, policies and guidelines, the potential risk for gender bias in SFI is assessed as low.

4.7 SRC

The SRC strategy and gender equality policy addresses comprehensively all risk areas of the risk grid 4.1., and has several counteracting measures in place, with an overall strategy, structures, and plan, including awareness raising, gender balance and gender awareness in decision-making, eligibility rules taking into account career breaks, high transparency, accountability and gender data collection and availability, addressing gender in the research content, as well as several specific measures targeting most of the funding cycle, from application phase to evaluation and decision-making. Innovative counteracting measures against gender bias include the observation studies conducted in evaluation panels which have been used to increase gender awareness in and refining guidelines concerning the evaluation process, and gender analysis of the infrastructure funding. Despite of the comprehensive measures described above, gender bias can occur in the peer review and evaluation of quality of the applications. Accountability inside the organisation of gender equality actions is high, and accountability to the Ministry of Education on gender equality measures and development is additionally diminishing the overall gender bias risk. Overall, the risk for gender bias in SRC is assessed as low.

4.8 NCN

There is a substantial risk for gender bias in the funding processes of NCN because the RFO lacks a gender equality strategy and operational plan, and accountability for actions is not defined. The gender dimension in research is not addressed in the research content. Gender equality is addressed by NCN in a fragmented and limited scope, in terms of eligibility related to parenthood, and gender data collection and monitoring. The collection of gender data and the ongoing survey on gender equality problems among researchers are, however, identified as important measures to increase transparency



and lower the risk for gender bias in the funding cycle. NCN has also recently established a Gender Equality Plan team and signed the DORA convention. The importance of the role of the coordinators, which includes to ensure that the review process is non-biased, should also be emphasised, as this can also diminish potential risks. Finally, NCN staff also shared information with GRANteD that they strive for gender balance in the expert teams. This is, however, only an informal practice without the status of a formal policy. As in all other core RFOs using peer review, gender bias can also occur in the evaluation of applications. Overall, the potential risk for gender bias in the research funding process is assessed as considerable, primarily due to the lack of established and formal gender equality policies and strategies.

4.9 SRDA

Gender equality is on the agenda of the SRDA only in terms of eligibility and involves taking maternity leave into account and observing academic age. There is a considerable risk for gender bias when the organisation is silent about gender equality, there is no gender equality strategy and operational plan, accountability is not defined, and the gender dimension in research is not addressed in the research content. Transparency concerning the evaluation and decision-making process is good, which is, on the other hand, diminishing gender bias risk. Some gender data is collected which as part of an emerging awareness of gender equality issues. The gender disaggregated statistics is, however, not monitored, collected, or published in a systematic manner. Overall, the potential risk for gender bias in the research funding process is assessed as considerable, primarily due to the lack of established and formal gender equality policies and strategies.

4.10 Summary

The risk of gender bias in the GRANteD core RFOs ranges from considerable and substantial to relatively low. We assess that a high gender bias risk factor is silence about gender and gender equality within the RFO, and absence of data and action: lack of an overall gender equality strategy, plan, structures and accountability, lack of gender data on gatekeepers, applicants, success rates and funding amounts, which means that gender aspects of the funding process cannot be monitored and the imbalances and biases that would need action cannot be identified. Risk for gender bias is also considerable if gender equality is addressed but only in a fragmented way, for example, only related to motherhood/parenthood, without an overall strategy and operational plan.

A gender bias risk that concerns all core RFOs is gender bias risk in peer review, whether the peer review takes place by external reviewers, in panels consisting of members appointed for a longer period or one evaluation at the time, or in RFO councils, boards, or equivalent. The gender balance of the panels and among reviewers is important but does not automatically guarantee an unbiased review process (ERAC, 2019; Hermansson et al., 2021; Van den Brink and Benschop, 2012). There are several countermeasures that the core RFOs have adopted to aim to mitigate the risk for gender and other bias, such as detailed guidelines for reviewers, clarification and definition of evaluation criteria, gender



equality or unconscious bias training for reviewers, monitoring the gender balance and accountability, and critically reviewing the evaluation process by gender observers in panels.



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5 GENDER BIAS RISK ANALYSIS OF SPECIFIC CALLS IN THE CORE RFOS

5.1 Gender bias risk analysis of funding instruments

In this section, we introduce the specific calls which have been selected for more detailed analysis in GRANteD and assess them using the framework for gender bias risk analysis developed in GRANteD. The selection of the instruments and funding calls was done in bilateral communication within WP2 and in Task 2.3 (Selecting RFOs for case studies). The selection reflected on the one hand, selection criteria defined in the GRANteD project, the time frame of the GRANteD project, and, on the other hand, the research interest from RFO side. The RFOs, for example, expressed interest in including, and having assessed, new funding instruments, or new elements within a funding process, which had recently been developed and implemented. Two such new funding approaches were included for two of the core RFOs: FWF (Austria) and SFI (Ireland).

Like the selection of core RFOs, the selection of instruments and calls was guided by the aspiration to include a broad variation in terms of characteristics of funding schemes. The following dimensions were particularly considered as important to include: i) different gender equality policies or elements of policies in place, ii) different decision-making mechanisms, and iii) different instrument and grant types. It was also decided to aim to include primarily instruments which fund basic research (due to a focus on early career grants in GRANteD).

Analyses of potential gender bias risks at the level of specific funding instruments and calls need to review the full funding cycle: from definition of the goals of the call, call text, terms of eligibility, training available for applicants, transparency of the funding process to the applicants, recruitment and composition of the evaluation/reviewer panels, definition of funding criteria, guidelines and training for the evaluators/reviewers, including Conflict of Interest regulations, and monitoring of the process and accountability upwards in the organisation or beyond.

The GRANteD project considers that there are potentially risks for gender bias in each phase or stage of this funding cycle, and thus adopts a process perspective on gender bias risks in research funding. A gender equality strategy and plan, which aims to alleviate and eliminate these risks therefore needs to address all these stages and phases. Most of these stages in the funding cycle are also influenced by more general strategies and organisational policies and rules, alongside resources and the organisational budget and the budget for the specific instrument. Based on these considerations and the framework developed in GRANteD, it is possible to illustrate in a figure how gender equality is, or can be, related to different phases in the funding cycle of a funding instrument and call (see Figure 5.1 below). The figure illustrates the relationship with both the gender equality strategy and plan, and the more general strategies and policies, and the feedback loops included.



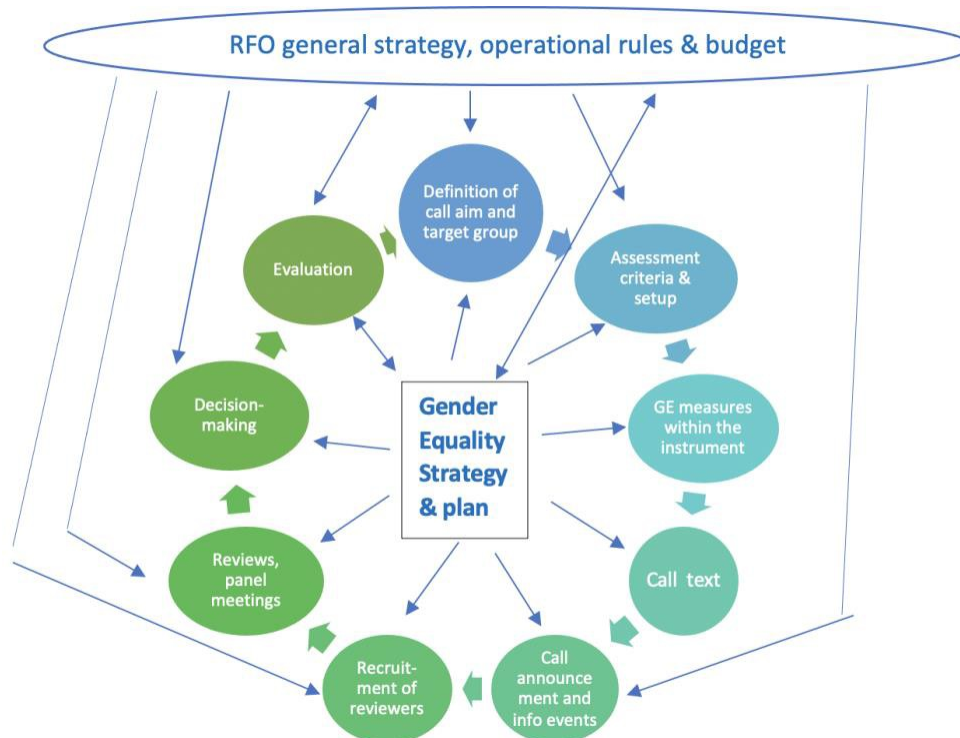


Figure 5.1. Funding cycle, and gender equality policy and measures

5.2 The funding instruments of core RFOs: overview of key aspects

The funding instruments GRANteD has chosen for more detailed empirical analysis are mainly targeted on the early career, postdoctoral phase of a research career, and most of them are awarding funding for individual researchers only. These instruments award funding for basic research in all scientific fields except one of them, which is specifically focusing on STEM. Two of the instruments are explicitly gender-marked, the Austrian FWF ESPRIT Early Stage Programme, and the Irish SFI Frontiers For the Future Grants, aiming to increase the proportion of female awardees and promote women's scientific career. All include some gender equality related regulations or measures related to the funding instrument. Two instruments, the Polish NCN SONATA and the Slovakian SRDA General Grants provide funding also for research groups. Table 5.1. presents key information on the funding instruments we are focusing on. We discuss and analyse the funding instruments based on RFO documents and information available on the RFO websites and annual reports. How the regulations and gender equality measures are implemented in practice, and what challenges are included in the implementation will be analysed by the Work Package 6, with interviews with both RFO staff responsible for organising and monitoring the funding process, and panellists and reviewers who assess the applications for these funding instruments.



Table 5.1. Funding instruments in the five core RFOs analysed by GRANted: key aspects

	FWF	SFI	SRC	NCN	SRDA
Funding Programme	ESPRIT – Early Stage Programme	Frontiers for the Future Programme - Grants	International Postdoc	SONATA	General Call
Target Group	Highly qualified postdocs at the beginning of their academic career	Highly qualified independent investigator	Newly qualified PhDs from a Swedish HEI for working abroad	Emerging researchers in postdoc stage	Universities, public institutions & private sector entities
Fields Funded	All fields	STEM	All fields	Innovative basic research in life science, STEM, and Social Sciences and Humanities	All fields, also Applied
Eligibility	<p>Doctoral degree max five years prior application</p> <p>International Scholarly Publications</p> <p>Mentor assisting PI in professional & personal career development</p>	<p>Doctoral degree min. three, max five years prior application</p> <p>International scholarly publications</p>	<p>Doctoral degree no more than 2 years prior to application</p> <p>Rules about deductible time due to career breaks specified</p>	<p>Doctoral degree between 2-7 years prior to application</p> <p>International scholarly publications</p> <p>Groups can apply but PI must be early career researcher</p>	Exclusively national applicants
Funding period	36 months (no extension)	24, 36, or 48 months	18-36 months	12, 24, 36 months	48 months
Amount of funding	PI salary	€200,000 - €480,000 (direct costs)	1 050 000 SEK per year (ca €101 775)	No cap for funding	Cap €250.000 (whole project time)
Evaluation and Decision-Making	Two-stage process. First peer-review. Final decision made by FWF Decision Board, based on results of peer-review	Two-stage process. First a remote peer-review. Second, final decision made by Oversight Panels based on results of peer-review by the Remote Reviewers	Evaluation in review panel. Panel rates and ranks applications. Final decision made by General Director	Two-stage peer review process performed by expert teams	Three-stage process. First, distance review. Second, SRDA Council makes consensus review on quality and provides ranking. Final decision made by Agency Director



GE and diversity measures specific for instrument	<p>Specific focus to support women researchers, both women and men can apply</p> <p>Aiming equal representation of women and men among awardees</p> <p>Child allowance</p> <p>Career breaks considered</p> <p>Coaching and training women applicants</p> <p>Mentoring (for women and men)</p> <p>Disability consideration</p>	<p>Emphasis on promotion of women, both women and men can apply</p> <p>Female candidates encouraged to apply</p> <p>Gender dimension in research content addressed</p> <p>Applications receiving the same final score, priority to applications from female candidates</p>	<p>General GE guidelines apply</p> <p>Gender equality used as a borderline condition: when ranking applications of equal quality, applicants from the under-represented gender shall be prioritised</p>	<p>Same as in all NCN funding</p> <p>Career breaks for women/ mothers to be considered</p> <p>Unbiased reviewing underlined</p>	<p>Age and length of the professional career of the responsible researcher & team members, including maternity/ paternity or parental leave to be considered while evaluating quality, skills & competence</p>
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In the following sections, we discuss in more detail the five funding instruments. Each section on the five instruments is concluded with a short summary of the assessment of potential gender bias risk and countermeasures mitigating these risks.

5.3 FWF: ESPRIT- Early Stage Programme

5.3.1 General description

The ESPRIT funding instrument addresses highly qualified postdocs of all disciplines at the beginning of their career development, and the aim is to help them to foster their research profile by supporting an independent research project. A specific element in this funding instrument is that the principal investigator will be supported by a mentor. The programme aims to promote excellent, innovative research and retain, attract, and win back outstanding researchers, with a special focus on supporting women researchers. The aim is that by promoting career and skills development and enhancing career prospects, the Austrian research institutes should be further strengthened (FWF, 2021).

The call was opened on April 27th, 2021, with a maximum budget of twenty million EUR per year. Applicants can apply for a grant on a rolling basis. It is expected that around 300 applicants per year will apply for funding (FWF, 2021).



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Table 5.2. Basic information on the FWF ESPRIT Programme¹³³

Target Group	Highly qualified postdocs from all disciplines at the beginning of their academic career
Requirements	<p>Doctoral degree awarded no more than five years prior to the time of application</p> <p>International scientific/scholarly publications</p> <p>Mentor who will assist the principal investigator in his/her professional and personal career development</p>
Amount of funding	<p>Principal investigator's salary</p> <p>Project-specific costs of €15,000 per year (lump sum) or up to a maximum of €25,000 per year (application must include a justification for the higher amount of funding)</p>
Duration	36 months (no extension)
Application language	English
Call opened	April 27 th 2021
Application deadline	No deadlines, on a rolling basis
Processing time	Estimated time of 4 months on average

5.3.2 Decision-making and review process

A two-stage process of decision-making is applied: first, a peer review, after which the final decision-making takes place by FWF Decision Board, based on results of the peer review.

In advance to the first stage, each application received by the FWF is assigned to a scientific and an administrative project officer at the FWF Office. They formally check it, ensure that it is complete and meets all requirements. The application is then, depending on its scientific area, assigned to a particular reporter and alternate of the FWF Board. It is ensured that the reporter and alternate are impartial regarding the application they receive. If the application relates to different scientific areas, one or more additional reporters/alternates provide assistance. The reporters check once again if the application meets all formal requirements (FWF, 2020a).

¹³³ <https://www.fwf.ac.at/en/research-funding/fwf-programmes/esprit-programme>



For all applications meeting the formal requirements, reporters and their alternates recommend suitable peer reviewers. When choosing the peer reviewers, it must be ensured, that no Conflict of Interest arises (neither positive nor negative). To avoid any bias or prejudice, these reviewers are all leading international experts in their scientific fields and have not been located in Austria for the last five years. No more than 15% of the reviewers can be from Germany or Switzerland. The reviewers must have at least the same qualifications as the applicants. Reviewers should not be nominated more than twice a year. Additionally, the selection of the reviewers should reflect diversity in terms of gender, age, regions and (where applicable) areas of expertise, with a suitable mix of younger and older reviewers (FWF, 2020a).

Each application is reviewed by two reviewers. The review comprises a written statement by each reviewer, where specific questions related to the application are addressed, and an overall formal assessment for each specific question, using a five-point scale. Each review consists of two sections. The first section is made available to the applicant (including the rating), the second section is only for the use of the FWF. Here reviewers provide additional remarks to the FWF (FWF, 2020a).

The scientific project officer and the reporters assigned to the application then check the peer reviews for bias and formalities before the review is handed over to the FWF Board. At the Board meeting, the reporter responsible for the application presents it to the Board and takes into account comments of the alternate. Members of the Board, who are in conflict of interest with the applicant leave the room during the discussion.

Based on the written reviews, the ratings they have assigned and the Board discussions, all applications are grouped and ranked into three categories (FWF, 2020a): Approval: category A; Further discussion is needed: category B; Rejection: category C. Category B again is divided into B+ / B / B-, The cut-off is usually set at B+. Once the decision is made, the FWF Secretary communicates the decisions to the applicants (including the anonymous reviews). In case of rejections, to ensure a maximum of transparency and comparability in decisions, a standardised reason of rejection is communicated to the applicants (FWF, 2020a).

The decision-making process is described on the FWF website, with an illustration including all key phases of the process.

5.3.3 Gender equality measures in place

With the ESPRIT Programme, the FWF places particular emphasis on promotion of women, even though the programme is open for women and men. The programme sets additional measures to improve the visibility of successful women researchers. Those measures are the following (FWF, 2021d):

- Equal representation of women and men among awardees: The FWF plans to award at least half of the projects to female investigators. The approval rate of projects by female



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investigators therefore should not be less than the approval rate of male investigators.

Additional female investigators should be given priority, especially in disciplines in which women are underrepresented at the FWF as principal investigators.

- Child allowance: Female investigators, who are employed full time after the birth of a child, can apply for child allowance. This amounts up to €9,600 per child per year (= gross salary including all employer and employee taxes; paid out 12 times a year) up until the child's third birthday.
- Consideration of career breaks: The FWF takes justified career breaks in consideration, when assessing the principal investigator's eligibility to apply (e.g., parental leave, caring for a family member, long-term illness, and military or civil service).
- Inclusion of disabled and chronically ill people: The FWF takes any exceptions from typical career paths due to disability and/or chronic illness into consideration in determining whether the principal investigator meets the application requirements.
- Coaching and training: Female investigators can attend special coaching sessions and trainings for women during the ESPRIT programme.
- Mentoring: Each principal investigator (both women and men), is supported in their career development by a mentor.

5.3.4 Gender bias risk assessment

The ESPRIT programme is informed by the comprehensive approach to gender equality in FWF, discussed above in this report, in sections 3.2, 4.5, 5.3.3, suggesting a relatively low overall risk for gender bias in FWF funding. The ESPRIT programme, furthermore, includes several elements which aim to mitigate gender imbalance among the early career researchers funded by this funding instrument, across the funding cycle. These include addressing the application phase and eligibility by broadened eligibility rules, aim for funding equally women and men from the programme, work-life balance support to female researchers during the funded project, and professional career support through mentoring and coaching. Given that the funding instrument aims specially to support early career women researchers, it is highly relevant that the equality measures that are in place seek to mitigate various gender bias risks in this crucial and vulnerable career phase. Obviously unconscious gender bias in evaluation of merits can occur also concerning this funding instrument.

5.4 SFI: SFI Frontiers for Future Programme

5.4.1 General description

The Irish government's strategy *Innovation 2020*, launched in 2015, already included a target to be delivered by the strategy, which foreshadowed the funding programme focused on in this policy analysis: "a new Programme of Funding for Frontier Research will be introduced, providing resilience and responsiveness to meet new challenges or opportunities as they emerge" (Department of Further and Higher Education, Research, Innovation and Science, 2021).

The SFI funding instrument Frontiers for The Future Programme (FFP) is described as "a key component of the SFI Strategy", enabling SFI "to deliver on the specific target to support 140 individual led research



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grants per year” (SFI, 2021a). The programme was clearly placed within the national research strategy. To be eligible for funding through the SFI Frontiers for the Future Programme, all proposals must be aligned to one of the 14 Refreshed Priority Areas for 2018-2023¹³⁴ or to any other research area within SFI’s legal remit (i.e., oriented basic or applied research) where there is convincing evidence that there will be significant potential for economic and/or societal impact in Ireland.¹³⁵

The FFP provides funding through two streams: Frontiers for the Future Project, and Frontiers for the Future Award. It was developed as two programs merged into one (with same eligibility criteria). The Frontiers for the Future Project programme provides funding for high-risk, high-reward research that facilitates highly innovative and novel approaches to research. The Frontiers for the Future Award provides larger scale funding for innovative, collaborative, and excellent research programmes that have the potential to deliver economic and societal impact (SFI, 2019a). The focus in the GRANteD project is on the project Grants and not the Awards, and it is the Frontiers for the Future Project Grants Programme that is described in more detail below.

Table 5.3 below summarises key information on the funding instrument.

Table 5.3. Basic information on the FRONTIERS FOR THE FUTURE programme¹³⁶

Target Group	Highly qualified independent investigator in the areas of science, technology, engineering, mathematics and medicine (STEMM), who holds a PhD for at least three years. The applicants can also choose to be reviewed as an “Emerging Investigator” (see below for criteria for this).
Basic Requirements	Doctoral degree awarded no more than five years prior to the time of application International scientific/scholarly publications
Amount of funding	€200,000 - €480,000 (direct costs)
Duration	24, 36 or 48 months
Application language	English
Call opened	6 th February 2019
Application deadline	Deadline for pre-proposal submission: 28 th March 2019. Deadline for full proposal submission: 29 th August 2019.
Processing time	Estimated time of 4 months on average

¹³⁴ <https://enterprise.gov.ie/en/Publications/Publication-files/Research-Priority-Areas-2018-to-2023.pdf>

¹³⁵ <https://www.sfi.ie/about-us/about-sfi/what-we-do/>

¹³⁶ <https://www.sfi.ie/funding/funding-calls/frontiers-for-the-future/>

5.4.2 *Decision-making and review process*

There are written guidelines for both applicants and reviewers available, which describe the decision-making process and the review process (SFI, 2019a; SFI, 2019h; SFI, 2019i). A schematic process diagram is also provided on the SFI webpage, illustrating the funding process and the different phases, from the submission to the final decision, including the review process, to further inform about the different stages in the process.¹³⁷ In addition to this, the review guidelines are also communicated in a video that the reviewers watch, and in the 2021 call the review process is also described in detail in a webinar for the applicants.¹³⁸

The application and review process for the FFP was slightly amended between the call 2019 and the call 2020. For the call in 2019 a pre-proposal system was used which meant that the applicant sent in a shorter, three-page research programme in March 2019. Based on this pre-proposal the applicants were invited to submit a full proposal or the pre-proposal was rejected. The deadline for the full proposal was August 2019 (SFI, 2019h). As this system is no longer used by SFI the details of the pre-proposal system will not be elaborated in detail here.

The main part of the review process and the decision-making of the FFP is still characterised by a two-stage process. The first stage involves a remote peer-review by Remote Reviewers. The second stage involves a final decision-making process by the Oversight Panels/Sitting Panels, based on the results of the peer-review by the Remote Reviewers.

The very initial stage, however, in advance to the first stage of the review process, takes place immediately after the submission deadline, when each application received by the SFI is formally checked against the eligibility criteria (SFI, 2019h). This initial eligibility check takes 2-3 weeks.¹³⁹ After the eligibility check, the first stage of the main review process starts as each proposal is assigned to three external Remote Reviewers. Each application is thus reviewed independently by three Remote Reviewers.

The review itself comprises of a written statement by each Remote Reviewer, where specific questions related to the application are addressed. The reviewers score the applications according to in total 9 different scores which are described more in detail below. An overall formal assessment for each specific question is produced using a five-point scale (from low to outstanding). The different question/scores are weighted. In short, the weighting of the review scores involves less emphasis on the Impact criterion for SFI Frontiers for the Future Programme Projects compared to Awards. In addition, the focus in the assessment of the applications is on the research program and quality of proposal, not the track record of the researchers (SFI, 2019a).

¹³⁷ <https://www.sfi.ie/funding/funding-calls/frontiers-for-the-future/Frontiers-for-the-Future-Programme-2021-Review-Process.pdf>

¹³⁸ The video for the reviewers is only available to watch for registered reviewers via cloud-service which require passwords and log-in information. The webinar for the Frontiers for the Future Programme 2021 was available for download to the public on the SFI webpage (under the heading Webinar):

<https://www.sfi.ie/funding/funding-calls/frontiers-for-the-future/>



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 824574.

For the FFP calls in 2020, in total, 117 so called Remote Reviewers participated in the assessment of the applications. Each reviewer received a total of six proposals to assess (as already mentioned above, each proposal is assessed by three reviewers). The reviewers had three months to conclude their assessment, December 2020-February 2021, and the assessments were available in February (for the call 2019 the assessments were available in March). In total, 250 applications to the Frontiers for the Future Programme Grants were submitted to the call in 2020. 40% of the applications submitted in the call for 2020 were from female researchers and 60% were from male researchers.

The applicant of the FFP grant is also allowed to add the names of up to three individuals that may be excluded from reviewing the Full proposal. This information is not made available to reviewers (SFI, 2019a). The identity of international experts who conduct reviews as Remote Reviewers, however, remains confidential and is not disclosed to the applicants (SFI, 2019a). SFI aims to invite a new cohort of reviewers to Stage 2 (for review of Full Proposals) and not invite the same reviewers as in Stage 1 (Pre-Proposal) (SFI, 2019e). The use of external international independent reviewers is described as an essential part of SFI's decision-making process.¹⁴⁰ The external reviewers, however, only assist in the process and make funding recommendations, but do not make funding decisions. The final responsibility for evaluation and award decision lies with SFI (SFI, n.d.-d).¹⁴¹ The Sitting Panels/Oversight Panels provide the ranking: a ranked list of fundable proposals to the SFI Executive Committee for approval, or SFI Grant Approval Committee, which is required in situations where the amount of SFI funding is above the delegated authority of the SFI Executive (SFI, 2019j).

The Remote Reviewers constitute so called virtual panels, which do not meet to discuss together the applications or their reviews.

One of several aspects which are specific for the FFP program is that the applicants have a so-called applicant's response phase. The statements of the Remote Reviewers are sent to the applicants who can give feedback on the statements (response option). This phase takes place during February/March and during this phase the applicants can respond to the initial reviewers' assessments. After this phase the reviewers can provide additional remarks and change their reviews in positive or negative direction and they can also see the comments of the two other reviewers, assessing the same application.¹⁴²

Once the virtual panel has submitted their narrative reviews and scores, a responsible SFI Scientific Programme Manager checks the reviews for formalities regarding the submission. This process also includes making sure that there is no insulting or defamatory language included in the reviews (SFI, 2019j)

¹³⁹ Language analysis for gender sensitive language of application documents is done (SFI, 2020b).

¹⁴⁰ <https://www.scienceeurope.org/media/0gufo3mt/se-ra-processes-slideset.pdf>

¹⁴¹ <https://www.sfi.ie/funding/sfi-policies-and-guidance/review/>



After the reviewers have finalised their assessments and their scores, the final phase begins, during which the so-called Oversight/Sitting Panels step in.¹⁴³ The Oversight/Sitting Panels are tasked with checking and making sure that the review process has been fair and consistent, and that they can agree on making the decisions based on the scores that they are presented with from the reviewers. The Oversight/Sitting Panels thus oversee the process in terms of fairness of proper procedures and rank the proposals.¹⁴⁴

Each reviewer in the Oversight/Sitting Panels is assigned a maximum of 10 proposals. These final panels do not, however, receive all the proposals. Only the proposals which have received a score over a certain score in the assessment from the external reviewers will end up in this final panel phase. What score that will constitute this cut-off point is not a pre-set decision, but something that can be adjusted according to the ratio between budget and number of applications.

The Oversight/Sitting Panel is required to give comments on the reviewers' opinions on the track record of the applicant, the research plan, the impact, the budget, the ethical issues, and the gender dimension in research. The gender dimension in research is considered according to whether the applicant adequately has addressed this in their proposal; if the applicant is only studying one sex, has the applicant provided justification of this; and if the applicant has included the gender dimension, is the design appropriate, and sufficiently rigorous (SFI, 2019j).

The review process is not arranged according to double-blind review procedures. During the assessment process, all reviewers have the names and details of the applicants. During the discussion in the Oversight/Sitting Panels, however, only the project number is used for communication.

Reviewers on the Oversight/Sitting Panels are distinguished international peer reviewers who have both the ability and experience to conduct a review of several proposals based on scientific excellence and impact. The panel members exhibit a broad range of expertise relevant to the proposals under review and assess the inputs of the full proposal reviews and the applicants' response to these reviews. These Oversight/Sitting Panels are invited to rank proposals and to make recommendations on which applications should be given consideration for funding by SFI.

SFI has signed the San Francisco Declaration of Research Assessment (DORA)¹⁴⁵, making a formal commitment to assessing the quality and impact of research more broadly than only by journal impact factors.¹⁴⁶ DORA was developed in 2012 and to date over 2000 organisations have signed the declaration. The objectives of DORA are to raise awareness to new tools and processes in research assessment, to advance practical and robust approaches to research assessment globally and across all scholarly disciplines, to facilitate the implementation of new policies and practices for hiring,

¹⁴² <https://www.sfi.ie/funding/funding-calls/frontiers-for-the-future/Frontiers-for-the-Future-Programme-2021-Review-Process.pdf>

¹⁴³ The panel is referred to as Oversight Panel in some SFI documents (SFI, 2021c) and Sitting Panels in others (SFI, 2019a).

¹⁴⁴ Usually, SFI uses four to five so called Oversight Panels/Sitting Panels. In 2020 they, however, only used two. GRANteD has no information why fewer panels were used during 2020.



promoting, and funding decisions, to catalyse change and to improve equity. DORA puts emphasis on that the Journal Impact Factor is highly problematic and limited as a tool for research assessment (e.g., not being transparent, being possible to manipulate). According to DORA, journal-based metrics should thus be given less weight in funding, appointment, and promotion considerations. The signatories of DORA therefore support the adoption of several recommendations and practices in research assessment, and the two recommendations specifically addressing funding agencies are the following:

Be explicit about the criteria used in evaluating the scientific productivity of grant applicants and clearly highlight, especially for early-stage investigators, that the scientific content of a paper is much more important than publication metrics or the identity of the journal in which it was published.

For the purposes of research assessment, consider the value and impact of all research outputs (including datasets and software) in addition to research publications, and consider a broad range of impact measures including qualitative indicators of research impact, such as influence on policy and practice.¹⁴⁷

In line with the commitment made with DORA, the SFI developed and adopted a new SFI Policy involving the applicants' CVs, and this was first implemented and rolled out in 2019 with the Frontiers for the Future Programme (FFP program).¹⁴⁸ The new policy involves a change to a CV written according to a narrative template. The change from metrics to narratives is a considerable change and is a manifestation of the use of a more holistic approach to the merits and achievements of the applicants. The aim of the narrative CV is, according to the SFI, to expand the definition of excellent researchers as it recognises a broader array of outputs and outcomes from research (besides Journal Citation Index) and captures a more holistic view of researchers' achievements.¹⁴⁹

The first version of the FFP CV template in 2019 consisted of two main sections, each of which could be maximum three pages.¹⁵⁰ The first of these sections involved applicant details including career profile, key achievements, and key publications. Under the headline of Career Profile, the applicant could provide details of any periods of leave from research or period of part-time work, for example due to parental leave. Under the headline (also in the first second) Key Achievements the applicant has the possibility to describe the significance and/or impact of up to five key achievements. For each of the achievements (for example, collaborations, sharing of datasets, prizes, awards, community education, public engagement) the applicants were supposed to outline the achievements, the specific role the applicant played, why it was important, what the benefits to the field the achievement played, and where relevant, the resulting economic and societal impact. In the second section publications details were to be provided, both three senior-author (first, joint-first or last author) publications and other publications (SFI, 2019).

¹⁴⁵ https://sfdora.org/signers/?_signers_keyword=Science%20Foundation%20Ireland

¹⁴⁶ <https://www.sfi.ie/funding/sfi-policies-and-guidance/review/>

¹⁴⁷ <https://sfdora.org/read/>



SFI continued to develop the structure of the CV for the FFP calls in 2020 and 2021. In the latest version the name of the template refers explicitly to DORA: “Lead Applicant DORA-compliant CV”, and it is provided in the Downloads section of the SFI Frontiers for the Future Programme website.¹⁵¹

Just as the template used in the call 2019 the updated version of the template for 2020 and 2021 allows for the provision of additional information such as periods of leave from research if relevant. The new guideline about the narrative CV explains that they are strictly applied, and even points out that the applications could be deemed ineligible for review, if metrics are included (except for citations). The guidelines therefore emphasise:

Please **do not** include any type of journal or publication metrics, e.g., impact factor and h-index, or refer to the total number of papers you have authored or co-authored. Deviating from these instructions may result in the redaction of these details or make your application ineligible for review (SFI, 2020/2021, bold and underlined in original).

In the new, updated, version of the CV template, the instructions regarding the key achievements in research excellence and impact are also more elaborated. Here the key achievements are divided up into four different categories, with more detailed instructions:

- A. Key Achievements in the Generation of Knowledge e.g., policy publications, innovation and commercialisation activities, open data sets).
- B. Key Achievements in the Development of Individuals (e.g., contribution to a team’s success, supporting equality, diversity and inclusion, mentoring, teaching, workshops).
- C. Key Achievements Supporting Broader Society & the Economy (e.g., policy changes, public engagement, community education).
- D. Key Achievements Supporting the Research Community (e.g., editing, reviewing, evaluations, contributing to ethics, research integrity, equality, diversity and inclusion).

¹⁴⁸ <https://sfdora.org/2020/11/19/dora-funder-discussion-science-foundation-ireland-takes-an-iterative-approach-to-develop-a-narrative-cv/>

¹⁴⁹ <https://www.sfi.ie/research-news/news/improve-grant-funding/>

¹⁵⁰ In the call document for the call 2019 there is however reference to „no template is available“, which probably should be interpreted as if the instructions for the CV is not referred to as a formal „template“.

¹⁵¹ This information can be found under the headline Review Process on the following page:
<http://www.sfi.ie/funding/funding-calls/frontiers-for-the-future/>



With the adoption of the new narrative CV, the review process was updated, too, to accommodate the assessment of the new narrative format of the CV. In both their communication to reviewers and to applicants, SFI is positioning the review process for the Frontiers for the Future programme within the framework of DORA and DORA principles (SFI, 2019a; SFI, 2019h). This means emphasising that all types of research output are recognised and that not only journal impact factors are assessed. Open access is also stressed as important.

Three review criteria are highlighted as key in the review process and in the assessment of the research plan and the applicants' merits.

1. Quality, significance and relevance of the applicant's and co-applicant's (if relevant) key achievements and research track record, commensurate with their career stage and research discipline, taking any periods of leave into account and considering the quality and relevance of the collaborators and/or mentor, if relevant. The achievements are assessed according to the four areas outlined in the CV template (1. Generation of Knowledge, 2. Development of Individuals and Collaboration, 3. Supporting Broader Society & the Economy and, 4) Supporting the Research Community.
2. Quality, significance, novelty, and strategic relevance of the research plan. This criterion includes importance, timeliness of the proposed research; quality of institutional support; communication and description of the research; comprehension of the current state of the art; value for money, the Sex and Gender dimension, etc.
3. The Potential impact and value to Ireland. This criterion includes appreciation of how research may be developed and exploited in the medium-to-long term; realistic and convincing evaluation of the benefits that will result from a successful project; areas and fields where impacts are likely to be made etc.

The review criteria were the same for the pre-proposal and for the full proposal in the 2019 call (SFI, n.d.-h; SFI, n.d.-i).

Reviewers are asked to score the four modules (see above 5.4.2) independently on a scale of one to five. This is meant to allow reviewers time for more deliberate thinking, so that they will actively consider each category. Then, the reviewers, using their own judgement, provide a composite score based on their initial assessment of the four modules. Notably, the composite score is not directly dependent on the individual module scores and is the final score used in the review. By using this two-step process, data can be gathered to understand which modules reviewers have put the most weight on in their final score and if reviewers are effectively recognising a broader range of researcher accomplishments.¹⁵²

5.4.3 Gender equality measures in place

With the Frontiers for the Future Programme, the SFI places particular emphasis on the promotion of women. The programme sets additional measures for women, and aims to improve the visibility of



successful women researchers. Those measures are described in the following manner in the call document for FFP 2019:

SFI is committed to increasing the number of SFI grants held by female researchers, as described in its Gender Strategy (Strand 2: Gender Balance in Research Teams). Towards achieving this goal, the Frontiers for the Future Programme will provide additional supports for excellent female researchers to secure funding. The programme will also provide additional opportunities for “Emerging Investigators” who have taken periods of leave from their research careers or who have not previously held a significant SFI award.¹⁵³

Female candidates are thus strongly encouraged to apply to this funding call and the SFI commitment to gender equality is underlined by that the Gender Strategy is referred to in the FFP call document. SFI is also stating that: “When ranking applications, in the event of applications receiving the same final score, SFI will give priority in the review process to applications from female candidates”.¹⁵⁴ The need for eligible research bodies to have an Athena SWAN Bronze Institutional Award by 2020 is also emphasised in the call document. Finally, also the aim for SFI to increase awareness of the gender dimension in research is stressed. This is done by requesting that researchers demonstrate that they have considered any potential sex/gender aspects in their proposed research programme at full proposal stage (thus not necessary for the pre-proposal stage).¹⁵⁵

Another feature of the FFP with potential gendered implications is the so-called Emerging Investigator Category. The applicants for the FFP can choose to be reviewed as an “Emerging Investigator” if they fulfil the following criteria:

- If they have not previously held a significant SFI research award as Lead Investigator or co-Investigator, or
- If they are re-entering the competitive scientific field after a period of eligible leave from research (e.g., statutory maternity leave, statutory adoptive leave, statutory parental leave, statutory paternity leave).

Applicants who are categorised as “Emerging Investigator” will be assessed alongside and against the same criteria as all other applicants, however, the weighting of the review scores will mean that there is increased emphasis on the quality of the research over the track record. Applicants applying under the Emerging Investigator category may also elect to assign a mentor to their application, who will provide advice and guidance to the award holder.

¹⁵² <https://sfdora.org/2020/11/19/dora-funder-discussion-science-foundation-ireland-takes-an-iterative-approach-to-develop-a-narrative-cv/>

¹⁵³ <https://www.sfi.ie/funding/funding-calls/frontiers-for-the-future/>

¹⁵⁴ This information is provided under the heading Gender Strategy on the following website:
<https://www.sfi.ie/funding/funding-calls/frontiers-for-the-future/>

5.4.4 Gender bias risk assessment

The SFI Frontiers for the Future Programme is informed by the comprehensive approach to gender equality in SFI, discussed above in sections 3.4, 4.7, and 5.5.3, suggesting a relatively low overall risk for gender bias in SFI funding. The Frontiers for the Future programme, furthermore, includes several elements which, throughout the different phases of the funding cycle, support a gender fair outcome of the application and review process. During the early phases of the funding cycle of the programme the gender equality strategy and plan influences the definition of the call aim and the identification of the target group, resulting in the encouragement of women to apply. During the later phases in the funding cycle, involving reviews and decision-making, women applicants are given priority in case of applications receiving the same final score. The gender equality strategy and plan of SFI also impacts the funding cycle for the programme with for example guidelines on recognition of eligible leaves. SFI's general strategy also influences the different phases in the funding cycle for the programme and could have impact on mitigating the risks for gender bias. For example, the assessment criteria and setup stage where the implementation of the narrative CV in accordance with the DORA convention, and the possibilities for the applicants to give feedback on the statements of the reviewers could possibly mitigate the potential risk for unconscious gender bias in evaluation of merits by reviewers and panels. Finally, also the gender dimension in the research project is acknowledged and the RPOs of the applicants are required to have gender equality plans (through the Athena Swan commitment) to be eligible. Considering both the rigorous gender equality measures and the other SFI measures impacting all the phases in the funding cycle the potential gender bias risk in the SFI Frontiers for the Future Programme is assessed as low.

5.5. SRC: International Postdoc

5.5.1. General description¹⁵⁶

The SRC International Postdoc grant is a career support grant with calls twice a year. The grants are awarded in all subject areas for newly qualified PhDs from Swedish HEIs, to work abroad for a period of 18 to 36 months. Grants from the Swedish Research Council shall be administered by a Swedish HEI or another Swedish public organisation, and the grantee must be employed by the administering organisation at the start of and throughout the grant period and any additional availability period (but not necessarily when applying). The administering organisation will decide on the employment format, salary and employment terms and conditions. The grantees are expected to remain employed full-time throughout the grant period.

An applicant whose doctoral degree was awarded more than 2 years ago is not eligible, but an exception applies if there are grounds for deductible time after the doctoral degree award that have affected the applicant's ability to gain merit as a researcher. The Swedish Research Council's recognised grounds are parental leave, positions of trust in trade union organisations and student organisations, mandatory service in the total defence forces, long-term illness (own reported illness or

¹⁵⁵ <https://www.sfi.ie/funding/funding-calls/frontiers-for-the-future/>



care of child/close family member), general medical internship (maximum 24 months) or further training/specialist medical internship for clinically active professionals (maximum 24 months). If the applicant wishes to claim deductible time, s/he must specify the recognised grounds and time involved in the application. A condition of this grant is that the grantee spends at least two thirds of the grant period abroad. The grantee may, however, divide this time up into several shorter periods. Table 5.4. below summarises key information of the call.

The results of the call are published on the SRC website as well as gender statistics of the applications and success rates.¹⁵⁷ SRC received all together 169 applications, 81 from female and 88 from male applicants; in total 41 were awarded, the total amount of funding awarded was nearly SEK 125 million. Women and men were applying for this call in nearly equal proportions, but women's success rate was lower: 21% (N=17), men's 27% (N=24). The approval rates varied between 24% and 26% between main disciplinary areas. Of grant amounts women received SEK 50,4 million in total, men SEK 74,55 million. These figures are available on the SRC website.¹⁵⁸

Table 5.4. Basic information on the SRC International Postdoc Grant¹⁵⁹

Target Group	<p>Grant type: Career support</p> <p>The purpose of the grant is to give newly qualified researchers with a doctoral degree from a Swedish higher education institution (HEI) the opportunity to expand their networks and their competences by working abroad under secure employment conditions.</p> <p>Subject areas; Humanities and Social Sciences, Medicine and Health, Natural and Engineering Sciences, Educational Sciences</p>
Requirements	Individual researcher who completed a doctoral degree no more than 2 years ago. Rules about deductible time are specified. No participating researchers may be invited to join the application.
Amount of funding	1 050 000 SEK per year (c.€101 775)
Duration	18-36 months
Application language	English
Call opened	August 19, 2020
Application deadline	September 22, 2020
Processing time	Estimated time of 4 months on average

¹⁵⁶ This presentation is based on the extensive information on the SRC website on the grant form:

<https://www.vr.se/english/applyingforfunding/calls/internationalpostdocgrant>

¹⁵⁷ <https://www.vr.se/english/applying-for-funding/decisions/2020-09-08-international-postdoc-grant.html>

5.5.2. *Decision-making and review process*

The decision-making on the international postdoc grants is explained on the SRC website to the applicants in a transparent way, including the composition of the review panels, by name and institutional affiliation. The applications are evaluated by a review panel where the members are Swedish and international researchers. At least three members review and grade each application individually. The entire review panel then meets at a review panel meeting to discuss and prioritise the applications, and finally to make a proposal for a decision to the Director General.

A certain proportion of the applications with the lowest grades based on the members' individual reviews are screened out ("shifted") in the beginning of the review panel meeting. These applications will not be the subject of discussion, allowing room for more detailed discussion and prioritisation of the applications rated by the three reviewers to be of higher quality and having a reasonable chance of being funded. The applications screened out will, after the decision has been made, receive a final statement including grades the applications received. The other applications receive a more detailed final statement that reflects the review panel's discussion and overall assessment of the scientific quality of the application.

The evaluation of the scientific quality of the applications is made based on four basic criteria (scientific quality of the proposed research; novelty and originality; merits of the applicant; feasibility). The purpose of using several components is to achieve a multi-faceted evaluation. The criteria are assessed on a seven-grade scale, except for feasibility, which is assessed on a three-grade scale. This is a mobility grant, and thus in addition to the basic criteria, the applications are also assessed using an additional criterion, Internationalisation, and research environment, which is assessed on a three-grade scale.

The SRC guidelines on the weight of the criteria indicate that the scientific quality of the project is given the greatest importance when assessing the project, thereafter novelty and originality, and thereafter the merits of the applicant. Internationalisation is given greater importance than feasibility when assessing the project.

For each criterion, SRC has given guiding questions to support the panel members' evaluation of the application. These are also available for the applicants, which means they may use them as guidance when preparing their application.

¹⁵⁸ <https://www.vr.se/english/applying-for-funding/decisions/2020-09-08-international-postdoc-grant.html>

¹⁵⁹ <https://www.vr.se/english/applyingforfunding/calls/internationalpostdocgrant>



For the assessment of the quality of the project's research question and methodology, including its potential for future research, the guiding questions are as follows:

How high is the scientific quality in relation to the research frontier in the area? Is the project's question and methodology well described, and well founded? How important is the potential result for the research area and for future research? Are potential problems and alternative strategies identified and presented?

For the assessment of how well new theories, concepts, methods, and questions are implemented and developed, the guiding questions are:

Does the project have the potential to significantly advance the frontiers of the research field? Does the project include new ways of approaching scientific questions? To what extent are existing theories and methods used in an innovative and creative way? To what extent does the project investigate new research areas or new questions?

For the assessment of the applicant's merits and competence in relation to the proposed project, the guiding questions are:

How strong are the applicant's merits and competence in relation to career age, research area and previous research environment? To what degree does the applicant's previous experience and scientific competence strengthen the project?

For the assessment of the feasibility of the proposed project, the guiding questions are:

Are adequate resources available for the project's research question, including supervision and relevant equipment? Is the project's design and choice of method adequate for the project's implementation and expected result? Is the time plan and planning realistic and suitable in relation to the scope of the project? Are any ethical questions relating to the implementation of the project addressed in an adequate way?

For the assessment of the opportunities for the applicant to develop their research network and their competence as a researcher, the guiding questions are:

To what extent does the foreign host institution seem relevant for the research the application concerns? How suitable is the foreign research environment for the applicant's ability to develop new competences, their research network and their independence as a researcher? How suitable is the Swedish research environment for the applicant's ability to develop their career as a researcher? To what extent does the stay abroad and the project contribute to Swedish research?

The above subsidiary criteria are weighed together into an overall grade, which reflects the review panel's joint evaluation of the application's scientific quality.



5.5.3. Gender equality measures in place

In the Call texts, there is no reference to gender equality measures applied specifically in this call, but only to the general gender equality strategy of the SRC which was discussed above in chapter 3 (see section 3.4). However, in the handbook for the reviewers (SRC, 2019) which is 43 pages long, gender equality is mentioned not only in general terms referring to the strategy. The Handbook also explains how gender equality principles are to be applied in this specific call. The reviewers are told in the Handbook that

The Swedish Research Council shall promote gender equality within its area of activities. For this reason, the Research Council's board has decided on a gender equality strategy (see Appendix 3). One of the operational goals for the gender equality strategy is to "ensure that women and men have the same success rates and receive the same average grant amount, taking into account the nature of the research and the type of grant". Against this background, before adopting its proposal for allocation of grants, review panels shall take into account the gender equality goal and work out the success rate in its proposal, as well as considering and if necessary commenting on the outcome. **For the grant type International Postdoc, gender equality is used as a borderline condition, and when ranking applications of equal quality, applicants from the under-represented gender shall be prioritised.** (bold emphasis by authors of this report).

Further, when the process of shifting (filtering out the applications scored with low initial reviewer scores from more detailed discussion) is explained, the guidelines state

The chair shall also identify any application that, despite having a low ranking, should still be discussed at the meeting, for example applications where the ranking or grading by the three reviewers differ considerably. **The sifting shall be carried out with the gender distribution of the applications in mind, in order to ensure the process is not applied differentially for women and for men.** (bold emphasis by authors of this report).

Furthermore, under the heading Special Conditions, it is explained how the prioritising of under-represented gender is done at the panel level, and not by individual reviewers in their review of the application preceding the panel meeting:

For the grant type International Postdoc, it has been established that gender equality shall be a special condition for prioritising applications of equivalent scientific quality. **This means that in conjunction with the overall prioritisation, the review panel shall take into account the success rate of women and men, and as necessary prioritise applications from applicants of the under-represented gender when applications are deemed to be of equivalent quality.** Special conditions shall not be applied by individual reviewers in their work ahead of the review panel meeting. (bold emphasis by authors of this report).

The gender statistics time series of the International Postdoc included in the SRC Annual Reports show



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 824574.

an annual variation of men's and women's success rates, with some years men having higher success rate than women, some years vice versa, and rarely an equal success rate concerning one year. This could be interpreted as if the equal success rate aim is not in practice concerning individual calls or not even annual rates, but instead intended to be set for an average over a longer time span.

5.5.4. Gender bias risk assessment

The SRC comprehensive gender equality policy addresses many aspects of potential risks of gender bias in the funding process, indicating a low overall risk for gender bias in SRC funding, as discussed earlier in chapter 4. As is the case for all RFOs, the potential risk for unconscious gender bias in evaluation of scientific quality and merits by reviewers and panels is always present in peer review. In this funding instrument there are many countermeasures in place, in addition to the overall gender equality policies of the RFO: the borderline condition to prioritise underrepresented gender (thus far women) in case of the quality of the applicants is deemed to be equivalent, and the guidelines on that the "shifting" – screening out the applications with weakest initial ratings – should not be applied differently to women and men. The success rates of women and men do vary annually in this funding instrument, and the implementation of how this borderline condition is taking place in practice in the panels will be studied in WP 6 through interviews with panellists and chairs of panels. Since this is a mobility grant, the possibility that the Grant period abroad can be divided into several sections instead of demanding a long, unified period abroad is a seemingly gender-neutral regulation, but may have positive gender impacts, given the unequal care responsibilities of women and men. However, no additional funding in this mobility grant is allocated to grantees with families to cover childcare costs in a foreign country, which may not have such a comprehensive and affordable day care system as Sweden.

5.6. NCN: SONATA

5.6.1. General description

The SONATA funding instrument is a grant specifically designed to support emerging researchers in the postdoc stage, who are starting their career in research and acquired their PhD between 2-7 years before submitting the application. No senior researcher can be the Principal Investigator. If the application is sent from a team of researchers, this team cannot consist of more than one researcher holding a Habilitation degree or the title of professor. In addition, the senior researchers must be from another institution than the host institution of the Principal Investigator. All of this is to ensure that the junior researchers are independent (NCN, 2021a).

The instrument has existed since 2011 (SONATA 1) and there is a call for applications once a year. The call studied in GRANteD in 2021-2022 was number 17, thus SONATA 17.¹⁶⁰ Nationality of the applicants is not important, but the applicant needs to be employed at a Polish host institution at the time of starting the grant. The grant covers research activities, publications, and overheads.

The success rate for all the SONATA calls between 2011-2020 was 18% which is lower than the success rate for the main funding instrument (open to all researchers) OPUS, which was 22-23% (NCN, 2021c). The success rate has also been decreasing as more people apply, projects get larger and at the same



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 824574.

time the NCN budget has not increased. For SONATA 13, the call that opened in 2017, success rate was 24% (NCN, 2018). For OPUS it was 20%. The success rate for SONATA 14, the call that opened in 2018, was 19% which was the same as for the success rate for the main funding instrument (open to all researchers) OPUS (NCN, 2019) (for more on the success rates, see below).¹⁶¹

The success rate for SONATA 14 (the call made in 2018) was 19% with 858 proposals submitted and 160 proposals recommended for funding. In 2019, proposals submitted by women made up 47% of all applications. 51% of the proposals awarded funding in 2019 had a male Principal Investigator and 49% had a woman Principal Investigator. The success rate that year for women was 21% and for men 24%. For the instrument included in the GRANteD study, SONATA, women accounted for 41% of the winners and men for 59%. That means that women had a lower success rate in SONATA than on average in all NCN calls. Albeit the 41%/59% is still within the scope of what it usually deemed a gender balanced outcome (40/60) this should be monitored over several years to see if there is a clear trend that women have lower success rate and if their success rate is increasing.¹⁶²

Table 5.5. Basic information on the SONATA programme, 2021 (SONATA 17)¹⁶³

Target Group	PhD 2-7 years before submitting the application
Basic Requirements	Doctoral degree awarded no more than five years prior to the time of application International scientific/scholarly publications
Amount of funding	No cap on the funding of the individual research projects. The total call budget: 200 000 000 PLN (€44 000 000)
Duration	12, 24, or 36 months
Application language	English
Call opened	15 th September 2021
Application deadline	Deadline for proposal submission: 15 th December 2021.
Processing time	The call shall be concluded within 6 months of the proposal submission date (NCN, 2021a). Eligibility check: December – January 2022 First evaluation stage (individual expert evaluations + first panel): January – early March 2022
	Second evaluation stage (external reviewers' evaluation + second panel): April – May 2022 Decisions (issued by the Director of the NCN): May – June 2022 (15 June 2022 at the latest)

¹⁶⁰ <http://www.ncn.gov.pl/en/ogloszenia/konkursy/SONATA17>

5.6.2. *Decision-making and review process*

The first phase of the review process is performed by the NCN Coordinators (NCN, 2020a). NCN uses so called Coordinators to organise the efforts of the expert teams and conduct calls for research proposals, make sure that the peer review process is correct, impartial, and fair. The Coordinators have at least a doctoral degree and are selected by open competition. The Coordinators manage three distinct teams: Art, Humanities and Social Sciences, Physical Sciences, and Engineering and Life Sciences (NCN, 2020a).

After the eligibility check the review procedure continues as a two-stage peer review process performed by dedicated expert teams.

Stage 1 – Qualification Check: During the Stage 1, the proposals are assessed individually by two experts working independently. Each expert receives 15 proposals to evaluate for the individual review and each proposal is evaluated by two reviewers. The proposals are in this stage evaluated in terms of content.¹⁶⁴ The individual evaluations serve as a point of departure for debate during the first panel session. During the first panel meeting all proposals are discussed. The decision to reject or approve the proposal is taken collectively by the expert team. Subsequently, the experts/panel members prepare a shortlist of projects that are admitted to the stage two of the peer review process (NCN, 2020a).

Stage 2 – Specialist Evaluation: The proposals on this shortlist are then sent to external reviewers. The proposals are evaluated by at least two experts. Again, just as during Stage 1, they are working independently of each other. These external reviewers are often foreign experts. The reviews from the external reviewers are later discussed by the expert team/panels during a second panel session. This second panel meeting is often shorter than the first meeting as there are fewer proposals to discuss. During this second meeting it is decided which proposals are funded.

The external experts are nominated by NCN Coordinators, based on the recommendations of expert team members.

The NCN Experts, involved in the evaluation of all proposals submitted to NCN, among them SONATA, are specialists in their respective fields. The NCN Experts can be divided into three categories:

¹⁶¹ The latest Annual Report from NCN available on the NCN webpage is NCN annual report 2019.

¹⁶² <https://ncn.gov.pl/en/centrum-prasowe>

¹⁶³ https://www.ncn.gov.pl/sites/default/files/pliki/centrum-prasowe/NCN_raport_2019_ang.pdf

¹⁶⁴ <http://www.ncn.gov.pl/en/ogloszenia/konkursy/SONATA17>

¹⁶⁴ <https://www.ncn.gov.pl/en/finansowanie-nauki/dla-ekspertow>



1. Expert team members: a group of experts selected by the NCN Council among prominent researchers and appointed by the NCN Director to evaluate proposals in a discipline or groups of disciplines. They evaluate proposals at the first stage of evaluation, discuss on the joint evaluation of each proposal at the meetings and jointly decide on the future of the proposals, including the list of proposals recommended for funding following the second stage of evaluation.
2. External experts: experts performing individual evaluation at the second stage of evaluation in most of the NCN calls.
3. Members of fixed teams: experts evaluating the reports on the implementation of grants awarded by the NCN (NCN, 2020a).

The review process is structured into 25 thematic subject panels within three groups – life science, STEM, and Social Sciences and Humanities.

NCN staff is not involved in the evaluation process more than as Coordinators of the panel meetings (see above for more information on the Coordinator role). Instead, it is the ranking in the list produced by the panel which determines whether a proposal is funded or not. NCN does not change the ranking of this list. In particular cases, however, the Coordinator, can, following consultation with the opinions of the expert panels, change the order of research proposals on the ranking list (NCN, n.d.).

The results of the call are, however, announced by way of a decision of the NCN Director (NCN, 2021a).¹⁶⁵ The process diagram describing the evaluation and decision-making of the funding instrument is available on the NCN website.¹⁶⁶

The evaluation of proposals is guided by a list of eight criteria provided by NCN (2021a)¹⁶⁷:

- 1) the compliance with the criteria of basic research laid down in Article 2 (1) of the NCN Act;
- 2) the quality and innovative nature of research or tasks to be performed;
- 3) the impact of the research project on the advancement of the scientific discipline;
- 4) the assessment of the feasibility of the research;
- 5) the scientific achievements of the principal investigator, including publications in renowned academic press/journals;
- 6) the evaluation of other projects carried out by the principal investigator and funded by the NCN or from other sources;
- 7) the relevance of the costs to be incurred with regard to the subject and scope of the research; and
- 8) the preparation of the proposal and compliance with other requirements set forth in the call announcement.

The expert reviewers evaluate both the quality of the research and the applicant's achievements (NCN, 2019a). 60% of the evaluation consists of the Project Assessment. 40% of the evaluation considers



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The Project Assessment is evaluated along three criteria: Scientific quality of the research project (30%), Potential impact of the research project (15%) and Feasibility of the research project (15%). The first criterion is scored from 0 (Poor) to 5 (Excellent). The second and third criteria are scored from 0 (Low) to 1 (Moderate) and 2 (High) (NCN, 2021b). The Qualifications and Scientific Achievements of the Principal Investigator is evaluated along over the past 10 years, “taking into account the stage of scientific career, career breaks, and the diverse range of research outputs evaluated from an international perspective” (NCN, 2021b, p. 36). The scoring for this criterium ranges from 0 (Poor) to 5 (Excellent).

In addition to this, NCN also follows the DORA convention.¹⁶⁹ This is briefly mentioned in the video “Guidelines for NCN experts”.¹⁷⁰ The implication of this is that the research record, rather than only bibliometrics, should be in focus for the evaluation. The implications of this for gender equality and a non-biased review process is, however, not elaborated on in the video referred to above, or in the call documents or in written guidelines for experts.

5.6.3. Gender equality measures in place

The gender equality measures in place for SONATA are the same as the more general measures in NCN. The existing measures can be distinguished into two types/groups, which also reflect two types of framings of gender equality. The first of these types/frames concerns acknowledging career breaks for women/mothers. The second frame concerns a non-biased evaluation process.

5.6.4. Gender bias risk assessment

Applying the GRANteD framework for assessing potential gender bias risks in funding instruments highlights that there are several considerable risks for gender bias in the SONATA instrument, during several of the phases in the funding cycle. The lack of formal gender equality strategy addressing the funding process in NCN creates a risk for gender bias across the funding cycle of this and other NCN funding instruments. There are, however, also elements that are alleviating the most acute and high risks. The Coordinators have an important role, acting as a type of observers during the critical review panel meetings. In addition, there is a certain level of transparency in the review process, career breaks for mothers are considered for eligibility, and generously so, and a commitment to a non-biased review process exists, which is also illustrated by NCN signing the DORA convention. The statistics on success rates for women and men in the SONATA programme, provided by NCN, do not illustrate apparent gender imbalance in the funding outcomes. The outcomes of the funding process are still within the scope of what is usually deemed a gender balanced outcome (40/60).¹⁷¹ However, as outlined previously in this report, gender bias can still occur in the decision-making processes and in other phases of the funding cycle, despite equal success rates for women and men. Combined, the potential risks present in the different phases of the funding cycle for the SONATA programme present the instrument with a considerable risk for gender bias.



5.1 SRDA: General Call

5.1.1 General description

The SRDA General Call (GC) as a funding instrument supports research and development in particular fields of science and technology. Instead of functioning in a top-down way, the GC is open for proposals, and research and development teams of any field may apply for funding on a project ground. Target groups can be applicants of individual projects in basic or applied research and development. The applicants determine the intent, the objective and substance of the project. The GC is a type of institutional funding scheme as the formal applicant must be the institution at which the Principal Investigator is employed. Only national applicants such as universities, public institutions and private sector entities can apply for funding. A main goal of the GC is to increase the research and development quality through competition between all applicants in a competitive environment.

The last General Call (GC) was open until the 23rd of November 2020 with a total budget of 41 million Euro and 622 applicants. The decision-making process took around 6 months and ended in May 2021. 191 out of the 622 applicants received funding in the GC VV 2020 (127 applicants in basic research and 64 in applied research). 52 grantees were women and 139 men.

Table 5.6. Basic information on the General Call VV 2020 programme¹⁷²

Target Group	Universities, public institutions, and private sector entities
Requirements	Exclusively national applicants
Amount of funding	€41 million; €250.000 max per project during the project
Duration of decision-making process	Duration 23 rd of November 2020 - May 2021
Application language	English
Call opened	22 nd of September 2020
Application deadline	23 rd November 2020
Processing time	Estimated time of 6 months

¹⁶⁵ https://www.ncn.gov.pl/sites/default/files/pliki/uchwaly-rady/2021/uchwala52_2021-zal1_ang.pdf

¹⁶⁶ <https://ncn.gov.pl/en/finansowanie-nauki/dla-ekspertow>

¹⁶⁷ https://www.ncn.gov.pl/sites/default/files/pliki/uchwaly-rady/2021/uchwala52_2021-zal1_ang.pdf

¹⁶⁸ [https://www.ncn.gov.pl/sites/default/files/pliki/uchwaly-rady/2021/uchwala79_2021-zal1_ang.pdf - page=34](https://www.ncn.gov.pl/sites/default/files/pliki/uchwaly-rady/2021/uchwala79_2021-zal1_ang.pdf-page=34)

¹⁶⁹ https://sfedora.org/signers/?signers_keyword=National%20Science%20Centre%2C%20Poland

¹⁷⁰ <https://www.youtube.com/watch?v=xoBxwLsaIK8>



The funds were allocated according to the requirements in individual groups of fields of science and technology. The Project funding is subject to the approval of the required amount of the state budget funds. The total amount of funds provided by the Agency to solve on Project is limited to a maximum of EUR 250,000 for the whole Project duration.

In the GC one natural person can be the Principal Investigator only in one submitted application. The Principal Investigator must exclusively be a person in an employment relationship with the organisational body that is the formal Applicant in the GC (i.e. the university, public institution or private sector entity that can apply for funding). Research capacity of any researcher must not exceed 2,000 hours in total per year for projects solution at the same time, regardless of the source of the support granted and/or the funds provider. The GC 2020 also contained a limit for the planned minimum annual research capacity of 300 hours for a nominal research team and 500 hours for the Investigator. In the General Calls, the Agency does not provide any capital funds for procurement of tangible and intangible assets. Indirect costs associated with solution of a project financed by the Agency's funds shall not exceed 20% of the total project costs provided by the Agency in each financial year.

5.1.1 Decision-making and review process

In general, the decision-making process under the General Call (GC) is following: All incoming applications are formally inspected according to formal rules assessing the fulfilment of technical and formal conditions and distributed among the SRDA Council members. For review, based on a random, anonymous, and automatic selection using the SRDA reviewer database, each application is assigned to two (external) reviewers. The reviews are then submitted to the Council members making the final decisions.

An application can be rejected on technical conditions. There are clear rules on this. If the Application does not meet the technical conditions, the Applicant must rectify the deficiencies within 14 days. If no deficiencies are remedied the Application is rejected for failure to comply with the technical conditions. In this case, the Applicant is notified of the Decision on rejecting the Application. The decision on rejecting the Application contains specific reasons for the Application's non-compliance with the technical terms.

When it comes to selection of experts, the Council of the Agency first appoints two rapporteurs from among its members for each application to be assessed. For each application, the Agency will provide two independent reviews per application. These are requested from and prepared by domestic and foreign experts. These reviews are the basis for the Council of the Agency for the application assessment. The Council may set up a working group for the expert preparation of the applications assessment process.

¹⁷¹ https://www.ncn.gov.pl/sites/default/files/pliki/centrum-prasowe/NCN_raport_2019_ang.pdf

¹⁷² <https://www.apvv.sk/grantove-schemy/vseobecne-vyzvy/vv-2020.html>



The process of basic and applied proposals varies with different assessment criteria in place. Decisions to grant the funding are also taken separately. The criteria of basic proposals are actuality, scientific goals, scientific level, and the overall quality of the project. For the applied proposals, the evaluation criteria are their actuality and the applicability of the research results.

The reviewer provides a verbal assessment of the fulfilment of the given criterions. The reviewer also assigns numerically the given criterion, the points ranging from 0-20 points for each criterion. The maximum number of points assigned in the assessment to an application by one reviewer is 100. The average number of points is calculated from the point values of the assessment by the independent reviewers and rounded to one decimal place.

The Council of the Agency first evaluates the project proposals rated as insufficient (ranging from a rating 75-0) and issues a decision not to provide funds due to the insufficient quality of the project proposal. In justified cases the Council of the Agency may reclassify a project upon the consent of an absolute majority of the voting members. This should be reasoned in writing.

For projects which have received average ratings (87-75 points) and projects which have received excellent ratings (100-87 points), the project rapporteurs develop a joint draft of consensus review on the given project, following their mutual discussion, including a project budget evaluation and the overall evaluation of the project's positive and negative aspects. The consensus opinion characterises the project assessment by the Council of the Agency, stating its own verbal assessment for each criterion, and at the same time, the Council determines the classification into each appropriate category. For the information of the members of the Council of the Agency, assessments of all reviewers for each criterion are automatically copied to the consensus review form, with assigning the categories by individual reviewers. In the consensus review, the project obtains a consensual quality score, which is calculated by the same algorithm as used for calculation of the project quality score based on the reviewers' assessment.

Following a panel discussion, the Agency's Council approves a consensus review on each application with a classification of each project and justifies deviations from the assessment of the project reviewers. The Council may change the average score by a maximum of ± 5 points. If the Council changes the average score by more than ± 5 points, the decision must be unambiguously reasoned.

The Council of the Agency approves classifications of the projects into individual groups according to their consensus quality score, with the consent of an absolute majority of voting members while voting on each project separately. The Council shall record all material facts and justifications concerning the decisions on the outcome of the evaluation of each application in writing.

The Council of the Agency shall approve the list of projects recommended for granting financial support and a list of the projects not recommended for financial support, with the consent of an absolute majority of the voting members. The Council shall issue a draft decision on providing, and/or non-providing the funding for individual projects, which takes into consideration the assessment of the



projects as well as the amount of available funding of the Agency for the Call. It shall then submit the draft decision for all submitted applications to the Director of the Agency.

5.1.2 Gender equality measures in place

The only explicitly gender equality related measure in place is that the reviewers and council members need to consider the age and length of the professional career of the responsible researcher and team members, as well as maternity/paternity or parental leave while evaluating quality, skills and competence of the responsible researcher and team members, but there are no specific criteria in place on how to take these into account. Only some gender data is collected on funding decisions. The SRDA has clear guidelines on the evaluation and decision-making, increasing transparency of the funding process, which is an important element from gender equality perspective.

5.1.3 Gender bias risk assessment

The transparency of the decision-making in the SRDA General Programme call is good, and it is positive that some attention is given to consider parental, maternity, or paternity leave when assessing the quality of applicants. However, the gender bias risk in the Programme is considerable, because, as mentioned in the section 3.5.2., the SRDA does not have a gender equality strategy and plan in place, and systematic gender data is not collected nor monitored on applicants, success rates and reviewers. Gender dimension in research content is neither addressed.



6 SYNTHESIS AND CONCLUSIONS

6.1 National funding regimes

An analysis of what kind of gender equality policies and measures are developed and implemented in research funding organisations needs to be conducted considering and informed by the national research landscapes, as well as national gender equality landscapes. Therefore, the first part of this report has focused on highlighting relevant key aspects in these national contexts. Clearly, the five research funding organisations in focus in this review, the FWF Austrian Science Fund, the Science Foundation Ireland SFI, the Swedish Research Council SRC, the Polish National Science Centre NCN and the Slovak Research and Development Agency SRDA, are functioning in different research landscapes and societal gender equality landscapes and contexts. This diversity is reflected in the timeline, framing, scope, and intensity of the gender equality policies and measures the RFOs have developed and implemented to address gender challenges and gender bias in research funding, as well as accountability concerning gender equality towards national authorities. Despite these differences, all are part of the European Research Area where gender equality is one of the long-term priority areas.

Three of the national contexts of our five core RFOs, Austria, Ireland, and Sweden, can be characterised as environments which enhance, demand, and enable ambitious gender equality policy development of the research funding and performing organisations and in the research and innovation sector more generally. Austria, Ireland, and Sweden are all countries which are ranked high or relatively high in international comparisons of overall gender equality in society. Furthermore, two of these national contexts, Austria, the national context of the FWF, and Sweden, the national context of the SRC, build on from an international perspective very long-term national engagement and political will to promote gender equality, through legislation and policy development in general, including specific policies and legislation in the research and higher education sector. Both Austria and Sweden have implemented long-term comprehensive policies and measures in research and higher education, and political will, demonstrated in the governmental demand of accountability in terms of gender equality towards universities and public funding agencies has played a crucial role in this.

In Ireland, the national context for the SFI, such development of national gender equality policy, goals, and measures in society, as well as in the research and innovation sector is notably more recent than in Austria and Sweden. On the other hand, Ireland has progressed rather quickly in this respect during the last decade, developing ambitious and comprehensive national policies and measures, evidenced by the improving of gender balance in research faster than other EU member states, and with sector-wide engagement among stakeholders to promote gender equality and diversity. Introducing a gender equality related eligibility rule for research performing organisations – that the RPOs need to have an Athena Swan Bronze award to be eligible to apply for funding from the Irish key funding agencies – is a notable policy measure, impacting the whole sector.

In Ireland, significant progress has been made during the last ten years in overall gender equality in society and in the research and higher education sector, with implementing gender equality policies in



RPOs and RFOs, and towards integrating the gender dimension in the research process and research context. Ireland has been ranked by the European Commission and EIGE among the top ten countries in gender equality for the last couple of years and been noted for progressing faster than other countries. It is also one among a smaller group of countries with an organisation which has a policy or strategy to integrate gender dimension in research content, providing guidelines and/or training material or workshops to assist applicants in integrating gender into their research designs, and to assist evaluators in reviewing gender components of research proposals (European Commission, 2021b). This together with other significant commitments from government bodies provide a national climate that is pressing and pushing for initiatives and results, but also beneficial and supportive for the development of policies and measures in individual RPOs and RFOs. The policy window (cf. Kingdon, 1993) for gender equality has thus been opened in Ireland.

The national contexts of Poland and Slovak Republic can be characterised both as less research-intensive than Austria, Ireland, and Sweden, and less proactive when it comes to the development of gender equality policies in society, even though EU membership has harmonised gender equality legislation in the Member States and had a positive impact in this direction. In neither country is gender equality integrated into research policy strategies or legislation. Both Poland and Slovak Republic are ranked lower in international comparisons of overall societal gender equality than the three other country contexts, and according to the EIGE gender equality index among the lowest performing countries within the EU.

Despite of the many advances of gender equality in higher education and research sector, especially in Austria, Ireland and Sweden, high engagement in gender equality planning in the sector, and improved gender balance in decision-making and leading positions in academia and research, researchcareers in all five countries continue to show clearly gendered patterns, and especially in the highest academic rank of full professor, similar male domination continues to persist in all five national settings.

6.2 Gender equality emphasis in the European Research Area

An important contextual factor beyond the national landscape is that all five core RFOs analysed in this report are part of the European Research Area and the European Union. Gender equality in research and academia has been on agenda in Sweden and Austria even before they joined the EU in 1995. For more than two decades, the European Union has promoted gender equality in research in European funding frameworks and Member States in a multitude of ways: through supporting knowledge production and policy development by addressing gender inequalities and bias in research and research organisations with numerous topical expert reports and policy reports, producing comparative European gender data on gender in research in the She Figures statistical publications since 2003; with support activities of the European Gender Institute EIGE, such as GEAR Toolbox¹⁷³; coordinating the collaboration between the Member States around policy through European group of civil servants and experts (the Helsinki group, and its successor the ERAC Standing Group on Gender in Research and Innovation); funding targeted research on gender and science and research, such as this GRANteD project, and resource mapping and co-creation projects in the area (including GenPORT¹⁷⁴, GENDER-NET Plus ERA-NET¹⁷⁵ and ACT-on-gender¹⁷⁶). The European Research Area has, since 2015, had Gender



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Equality and Gender Mainstreaming in Research as one of its priority areas (ERA Priority 4). This priority area involves addressing gender imbalances in research institutions and decision-making bodies and integrating the gender dimension into R&D policies, programmes, and projects.

The ERA activities on gender equality have produced and provide a wealth of knowledge, data, and practical tools for funding organisations to engage more proactively with gender bias and inequalities. The collaboration between European funding agencies, such as the GENDER-NET Plus ERA-NET project or the German-speaking D-A-C-H collaboration, provide important peer support for RFOs to develop further their measures and improve their funding processes.

With the initiative by the European Commission, to require gender equality plans in RPOs as a precondition to apply for grants from the European Commission within the Horizon Europe programme, the Commission has opened a window of opportunity for increased gender equality activities and measures in the member states. These stricter regulations regarding the establishment of gender equality action plans in HEIs has the potential to create the sense of urgency that is needed to drive change towards increased activities towards gender equality. This development is currently observed in many EU Member States in which previously only few HEIs have been engaged in gender equality actions. These countries include Poland, where according to She Figures 2021 only 36.7% of HEIs were engaged with gender equality actions in 2020. Many Polish HEIs are currently initiating work on gender action plans for the first time (Siemieńska, 2021, personal communication). The influence of the European Commission thus constitutes a supranational macro-level on which change towards increased gender equality is being leveraged (cf. Alonso, 2016; O'Connor & Irvine, 2020). On a national macro-level, NCN and other stakeholders in Poland, and RFOs in other member states, now have the chance to profit from and take advantage of this pressure to further emphasise the need for increased gender equality. For the RFOs this should be addressed by measures including assuring non-biased and fair research funding processes.

The considerations elaborated on in sections 6.1 and 6.2 above can be illustrated in a figure over how gender equality policies in RFOs are, or can be, related to different phases in the funding cycle (see Figure 6.1 below). Similar to figure 5.1, this figure also illustrates the relationship with the contextual factors in the national funding regime and gender equality regimes. Both figures aim to emphasise the multifaceted and multidimensional character of gender equality policies in this area, to suggest and promote complexity and a holistic approach to gender equality policies in RFOs, where the development of these policies concerns every stage and phase of the research funding cycle. This approach thus guards against oversimplification of approaches to development of gender equality policy (cf. Kalpazidou Schmidt & Cacace, 2017). The figure is also a model that can be useful for comparative studies of gender equality policies in RFOs in different countries, which operate under different research funding landscapes.

¹⁷³ <https://eige.europa.eu/gender-mainstreaming/toolkits/gear>

¹⁷⁴ <https://www.genderportal.eu/>

¹⁷⁵ <https://gender-net-plus.eu/>

¹⁷⁶ <https://act-on-gender.eu/>



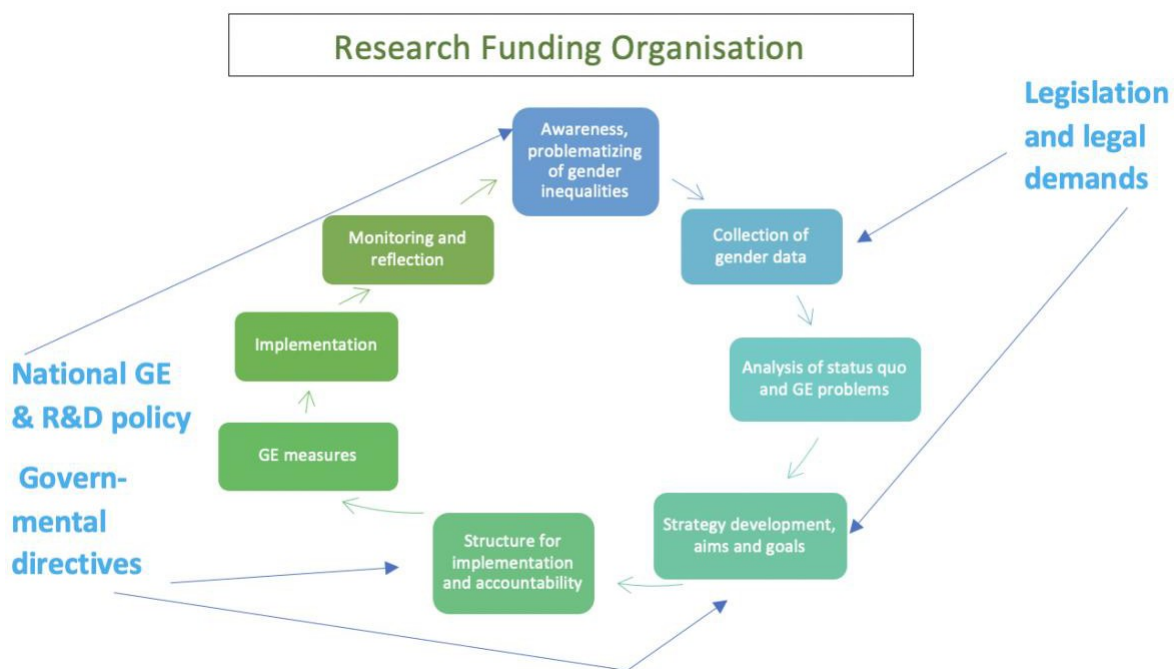


Figure 6.1. Gender equality policy cycle in Research Funding Organisations

6.3 Gender Equality Policies of the RFOs

As indicated in the introduction of this report, an increased interest, and actions of research funding organisations around gender equality can be observed in Europe and globally, but also a considerable variation in the approach, intensity, structures, and measures adopted, as also evidenced by the policy analysis of this report. The research funding organisations in our analysis have very different contextual and organisational conditions and support from the national policy level, which we have attempted to highlight in this report as a background of their policy developments. Gender mainstreaming as an approach, and addressing the whole funding cycle, is adopted by three of our core RFOs: FWF, SRC and SFI, as an overarching intervention strategy, which is also supported by the national policy approaches. All of them have developed a long and broad gender equality agenda (Cockburn, 1989), also including more recently the gender dimension in knowledge production. The approach of the two RFOs in which gender equality actions are only emerging, NCN and SRDA, is characterised by a short gender equality agenda, including only fragmented actions. NCN and SDRA have put a strong emphasis on equal opportunities in their guidelines for reviewers to take into consideration parental-leave and career breaks (cf. Håkansson & Sand, 2021). However, the implicit emphasis on maternity leave threatens to lock women and men in traditional roles, and re-produce gender stereotypes and gender segregation.

In the policy analysis of the five core RFOs, a common feature is that gender is mainly understood as a binary concept, concerning women and men, and furthermore, motherhood and parenthood is frequently foregrounded when gender is addressed. Men and masculinities are rarely addressed as



gendered issues. Intersectional approaches to gender equality and gender bias are largely absent in the policy documents, or only rather shortly mentioned without much elaboration, as in some SFI and FWF documents. Including intersectional approaches into gender equality activities is clearly a challenge for funding organisations but would further strengthen the policies (see, e.g., Woods et al., 2021).

Gender inequality in science and academia is a persistent problem, with no silver bullets or easy solutions. That is why an organisational learning approach towards gender equality is necessary. The RFOs analysed in this report which apply a gender mainstreaming approach are constantly developing, reviewing, and improving their gender equality policies and processes, and demonstrate an awareness of the importance of a reflective and critical approach, which enables organisational learning (see, e.g., Frisch, 2019; SRC, 2012, 2015, 2017), far from a “ticking boxes” approach.

Public research funding organisations are important stakeholders in the scientific community. How and to what extent the core RFOs are engaged in gender equality promotion in the wider research and higher education sector varies, including broad gender equality advocacy towards HEIs and advisory role towards the Government, as in the case of Swedish Research Council, or promotion of women and girls in the STEM field from schools, universities, and leadership positions, as in the case of Science Foundation Ireland. The FWF and SRC gender equality policies are further strengthened by their active engagement in national or regional collaboration of funding agencies around gender equality policies.

6.4 Gender bias risk

In this section we summarise the gender bias risk analysis. Gender bias in this report has been understood broadly and from an organisational perspective, to concern not only the evaluation of funding applications, but the whole funding cycle and organisational set-up of research funding in the RFOs. Seven potential risk areas have been highlighted: Strategy; Structure; Language and Communication; Evaluation; Transparency; Accountability, and Monitoring. These overlap in several ways.

A major gender bias risk is silence about gender and gender equality within the funding organisation and its strategies and structures: no gender equality strategy, no goals, no operational plan, no structures in place, no accountability within the organisation or beyond defined, no data gathering and publishing and no monitoring by gender (cf., e.g., Lee et al., 2010). A considerable risk for gender bias is also a short intervention agenda and fragmented approach to gender equality, as in understanding gender equality only or mainly in terms of obstacles motherhood may create in academic careers. In this vein, this kind of primarily apparent risk can be identified for two of the RFOs included in this report, SRDA and NCN, which both thus far lack formalised gender equality policies. The measures and activities that have been identified in this gender equality policy analysis are instead parts of other type of documents and general policies and are mainly focusing on motherhood and parenthood.

The core RFOs analysed in this report have introduced different measures to counteract risks for gender and other biases in research funding, by increasing transparency throughout the process, by



training applicants, raising awareness of gender equality and unconscious bias by obligatory or voluntary training of staff and reviewers, by clarifying and structuring the evaluation and decision-making process with detailed guidelines and review handbooks, by broadening eligibility taking into account parenthood and academic age, by clarifying and specifying evaluation criteria, introducing narrative CVs addressing competence, relevance and merits in a more comprehensive way beyond metrics, with Conflict of Interest policies in place, including response and complaint procedures in the funding process, and by collecting and monitoring gender statistics of the funding cycle.

6.5 Continuing work in GRANteD

The gender equality policy analysis and gender bias risk analysis performed in GRANteD Work Package 5 (WP5) provides background for building recommendations for future policy development. The work in the five case studies, constituted by the five GRANteD core RFOs, will continue and advance our understanding of the research funding processes in them and our knowledge of the differences between them. The work on these processes in the five GRANteD core RFOs will be deepened by GRANteD Work Package 6, in which implementation of gender equality policies and grant allocation processes from a gender perspective will be studied by interviews with staff and panellists in all core RFOs, as well as observations of panels when possible. Each participating RFO will also be provided direct feedback and dialogue about the research results by the GRANteD team.

Within the GRANteD project, a conceptual model has been developed for testing gender bias in funding allocation in several funding calls with quantitative data.¹⁷⁷ Drawing from the work in WP5 presented in this report, we suggest that policy related elements should be included to test this model. Including and testing the following variables related to the contextual research funding landscape, research funding organisation, funding instrument and panel, will add yet one more important dimension to the model.

Context level variables:

- Integration of gender equality in national research policy landscape (yes/no)
- Gender equality foregrounded in key general research policy documents (yes/no)
- Research intensity of the country (high/low)

Organisational level variables:

- RFO has adopted Gender Equality Strategy and/or Gender Equality Plan (yes/no)
- RFO collects and publishes gender statistics (yes/no)

Funding instrument level variables:

- Women encouraged to apply (yes/no)
- Specific measures in place to support women researchers (yes/no)
- Narrative CV in use (yes/no)
- Affirmative action/preference of female/underrepresented sex/gender in case of equal ratings (yes/no)

Panel level variables:

- Gender balance in the panel composition (40-60) (yes/no)



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- Sex/gender of the chairperson (woman/man)
- Obligatory gender bias/unconscious bias training for panellists (yes/no)

Gender equality policy development is an essential part of the discussions in the GRANteD Stakeholder Meetings which are organised by GRANteD and include members from GRANteD and the core RFOs as well as from other interested RFOs. The results produced within GRANteD are regularly discussed in these meetings in a co-productive approach, to generate both new practical and theoretical knowledge on gender bias in research funding processes. The results from this report will constitute a starting point for continuing discussions on policies and policy development, the impact of contextual factors, and on potential gender bias risk assessments. The more general recommendations for research funding organisations will be further developed as the final part of the project, in Work Package 9 (WP9): *Consolidating results and developing recommendations*.

¹⁷⁷ For more information on the conceptual model see section 1.3.



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8 APPENDICES

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