

**Report
on Monitoring
of ERA Priority 4
Implementation**

 Federal Ministry
Republic of Austria
Education, Science
and Research

**GENDER
ACTION**

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Report on Monitoring of ERA Priority 4 Implementation

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Executive Summary



The European Research Area (ERA) Priority 4 focuses on gender equality and gender mainstreaming in research and innovation. The objective is to foster scientific excellence and breadth of research approaches by fully utilising gender diversity and equality and avoiding an indefensible waste of talent. Within their National Action Plans (NAPs), European Union Member States and Associated Countries are asked to develop policies which address gender imbalances, particularly at senior levels and in decision making, and which strengthen the gender dimension in research. The aim of GENDERACTION Work Package 3 (WP3) is to analyse the implementation of Priority 4 in NAPs, identify good practices and develop recommendations for the next ERA Roadmap as well as its monitoring of gender equality. The results of WP3 will inform and feed into the work of WP4 Mutual Learning and Capacity Building Activities and WP5 Policy Advice.

The second report of GENDERACTION WP3 builds on the results of the first report on NAP implementation (D3.1) which showed that different countries take different approaches to NAPs and that the level of implementation of gender equality policies differs from country to country. Furthermore, NAPs differ regarding the concept of gender equality used. The analysis also identifies differences between EU15 countries and newer EU Member States (EU13 countries which joined the EU from 2004 onwards) regarding their experience with the development of NAPs and their gender equality policies.

The present report draws on multiple data sources (results from an analysis of NAP documents, an online survey conducted in 2017 and an update of the survey in early 2019, interviews with members of the Standing Working Group on Gender in R&I) and pursues a threefold aim:

- 1) to provide a set of indicators for monitoring NAP implementation,
- 2) to assess NAP implementation based on these indicators, and
- 3) to formulate recommendations for the next period of ERA implementation.

Our analysis shows that 26 of the 28 EU Member States participated in the ERA process by submitting and implementing a National Action Plan

(NAP). For several countries, the ERA Roadmap was the initial spark that triggered the development of their first-ever gender equality strategy for R&I (e.g. Cyprus, Luxembourg, Malta or Norway). In others, the NAP was used to consolidate and further develop existing policies which support gender equality in R&I. Member States had considerable scope when it came to developing a NAP within the framework of the ERA Roadmap. This allowed the NAPs to be aligned with the actual circumstances in each country (e.g. by addressing specific gender inequalities, building on existing experience with gender equality policies and involving relevant national stakeholders).

We used all the information collected to develop a typology of countries with respect to NAPs and NAP implementation. We distinguish therein between six clusters of countries:

- Countries with a **comprehensive and consistent NAP** and corresponding implementation (Austria, Belgium, Germany, the Netherlands, Slovenia, Spain and Sweden)
- Countries with **focused NAPs** (Cyprus, Denmark, Finland, Ireland, Luxembourg, Malta and Portugal) which address two out of three ERA gender equality objectives
- Countries with **inconsistencies** within the NAP or between the NAP and its implementation (Greece, Italy and the UK)

- Countries with **actionistic** NAPs (the Czech Republic, Estonia, Lithuania and Poland) which do not contain a context analysis but formulate priorities and/or implement measures
- Countries with **focused NAPs** but **without implementation** (Croatia and Latvia)
- Countries without a NAP (Hungary and Slovakia) or with a NAP but **without gender equality priorities** (Bulgaria and Romania).

It is striking that the cluster of countries which the GENDERACTION assessment categorises as good practice countries with regard to NAP Priority 4 implementation differs significantly from the countries identified as the leading group in the ERA Progress Report 2018 (EC 2019a). According to this report, Croatia, Lithuania, Latvia and Romania belong to Cluster 1, which contains the best-performing countries in terms of the share of women in Grade A positions. However, our analysis identified Austria, Belgium, Germany, the Netherlands, Slovenia, Spain and Sweden as the countries with comprehensive and consistent NAPs.

This difference in assessment results from different approaches to gender equality and correspondingly, from different indicators used to measure the implementation of gender equality policies. While the GENDERACTION assessment focuses on the implementation process of gender equality policies based on multiple data sources and indicators, the ERA progress report focuses on the development of the headline indicator and two supporting indicators. This approach is too limited to provide meaningful information for the assessment of progress towards gender equality in R&I.

Experiences with the NAP implementation and the results achieved so far show the potential of the instrument to initiate (further) development of gender equality policies. However, it is also evident that the process linked to the ERA Roadmap development, implementation and monitoring does not provide incentives to increase engagement regarding gender equality in R&I for countries that are relatively inactive. Consequently, the gap between experienced and inactive countries with regard to gender equality in R&I is widening.

Our recommendations focus on three areas and aim at supporting a more coherent gender equality policy in R&I. (1) Experiences with the

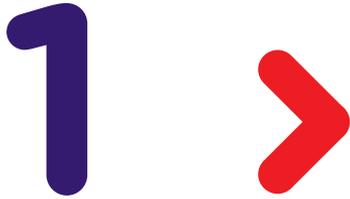
NAPs 2015-2020 indicate a need for an **adaptation of the NAP development and submission procedure**, including the provision of more detailed guidance for NAP development, the involvement of relevant national stakeholders and the consideration of gender equality in other ERA priorities. (2) The analysis of NAP implementation produces results which are not in line with the ERA progress report as the countries identified as top performers by these approaches differ. Hence, a **meaningful set of indicators for monitoring NAP implementation** needs to be developed. GENDERACTION suggests a combined approach using quantitative (available) indicators and qualitative/survey data provided by the countries. (3) The varying goals and focus of **gender equality policies** presented in NAPs indicate a lack of a gender equality discourse. We recommend using the NAP development, implementation and monitoring processes for consolidating a gender equality discourse for R&I in the EU. This discourse should aim at establishing a shared understanding of gender equality and common goals at the EC and MS level. This common understanding of gender equality and its goals is the basis for mutual learning.

Another important aspect of a gender equality discourse is to stress the positive relationship between gender equality on the one hand and innovation and excellence on the other hand. The analysis shows no positive correlation between the share of women in Grade A and the innovation and excellence indicators. But the higher a country scores on the Gender Equality Index, the higher its innovation potential. Similarly, the correlation between the share of RPOs with GEPs and the innovation indicators are significant and positive. This means that an increasing share of RPOs with GEPs is positively correlated with a countries' innovation potential. The upcoming discussion of major societal challenges – from the European as well as the global perspectives – should explicitly address this link.

Abbreviations

AC:	Associated Countries, countries associated to Horizon 2020
ARES:	Académie de recherche et d'enseignement supérieur (Belgium)
AT:	Austria
BE:	Belgium
BG:	Bulgaria
BMBFW:	Federal Ministry of Education, Science and Research (Austria)
CODE_IWP:	Commitment to Democracy through Increasing Women's Participation (Cyprus)
CY:	Cyprus
CZ:	The Czech Republic
DE:	Germany
DFG:	German Research Foundation (Germany)
DK:	Denmark
DM:	Diversity Management
EC:	European Commission
ECTS:	European Credit Transfer and Accumulation System
EE:	Estonia
EL:	Greece
EMM:	European Monitoring Mechanism
ERA:	European Research Area
ES:	Spain
EU:	European Union
EU13:	Member States which joined the EU from 2004 onwards (Bulgaria, Croatia, Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia and Slovenia).
EU15:	Member States which joined the EU by 1995 at the latest (Austria, Belgium, Denmark, Finland, France, Greece, Germany, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden, the United Kingdom)
FI:	Finland
FR:	France
FWB:	Fédération Wallonie-Bruxelles (Belgium)
GCI:	Glass Ceiling Index
GE:	Gender Equality
GEP:	Gender Equality Plan
GPC:	High Level Group for Joint Programming
H2020:	Horizon 2020, EU funding scheme
HEI:	Higher Education Institution
HES:	Higher Education Sector
HG:	Helsinki Group (predecessor of SWG GRI)
HR:	Human Resources

HR:	Croatia
HRS4R:	Human Resources Strategy for Researchers
HU:	Hungary
IE:	Ireland
IT:	Italy
JUST:	Directorate-General for Justice and Consumers (European Commission)
LT:	Lithuania
LU:	Luxembourg
LV:	Latvia
MINT:	Mathematics, Informatics, Natural Sciences and Technology
MT:	Malta
MS:	Member States
NAP:	National Action Plan
NL:	The Netherlands
NWO:	Dutch Research Council (Netherlands)
OMCI:	Observatory for Women, Science and Innovation (Spain)
OTM-R:	Open, Transparent, Merit-based Recruitment
PL:	Poland
PSF:	Policy Support Facility
PT:	Portugal
RFO:	Research Funding Organisation
R&I:	Research and Innovation
RO:	Romania
RPO:	Research Performing Organisation
SE:	Sweden
SFIC:	Strategic Forum for international S&T Cooperation
SI:	Slovenia
SK:	Slovakia
S&T:	Science and Technology
STEM:	Science, Technology, Engineering and Mathematics
SWG GRI:	Standing Working Group on Gender in Research and Innovation
UK:	The United Kingdom
UNESCO:	United Nations Educational, Scientific and Cultural Organization
UNITWIN:	University Twinning and Networking Programme (UNESCO)
VSNU:	Dutch Association of Universities
WLB:	Work-Life Balance
w-fORTE:	Economic impulses by women in research and technology (Austria)
WP:	Work Package



Introduction

The European Research Area (ERA) Priority 4 focuses on gender equality and gender mainstreaming in research and innovation. The objective is to foster scientific excellence and breadth of research approaches by fully utilising gender diversity and equality and avoiding an indefensible waste of talent. Within their National Action Plans (NAPs), European Union Member States are asked to develop policies which address gender imbalances particularly at senior levels and in decision making and which strengthen the gender dimension in research. Member States and Associated Countries should initiate gender equality policies in research performing organisations (RPOs) and research funding organisations (RFOs). They should also monitor the effectiveness of such policies on a regular basis and adjust measures as necessary.

The aim of GENDERACTION Work Package 3 (WP3) is to benchmark the implementation of Priority 4 in national ERA roadmaps or NAPs¹. WP3 focuses on identifying best practices in national legal and policy environments which support progress towards achieving Priority 4. The results of WP3 will inform and feed into the work of WP4 Mutual Learning and Capacity Building Activities and WP5 Policy Advice.

The first WP3 (D3.1) report showed that different countries take different approaches to NAPs and that the level of implementation of gender equality policies differs from country to country. While some countries describe their full gender equality policy mix in their NAPs, others restrict their description to the current focus of their gender equality policy or a process to further develop the existing policy mix. At the other end of the spectrum are countries which only formulate a general commitment to gender equality or do not even address it at all in their NAPs. Furthermore, NAPs differ regarding the concept of gender equality used. While some countries address all three ERA gender equality objectives (increasing the share of women in all fields and hierarchical levels of R&I; structural change to abolish barriers for women's careers; integration of the gender dimension in research content and teaching), others only focus on one or two. An online



1 For purposes of readability, we will refer to these in the remainder of this report simply as National Action Plans (NAPs), a term which is used as a synonym for national ERA roadmaps.

survey revealed differences between EU15 countries and newer Member States (EU13 countries which joined the EU from 2004 onwards) in several respects. For 57% of newer Member States the NAP was the first policy document on gender equality in R&I, a fact that only holds for 25% of EU15 countries. Priority 4 is more likely to be interlinked with other priorities in EU15 countries (39% versus 14%). EU13 countries refer more frequently to difficulties regarding the development of Priority 4.

The second report in GENDERACTION WP3 builds on the results of the first report on NAP implementation (D3.1) and pursues a threefold aim:

- 1) to provide a set of indicators for monitoring NAP implementation,
- 2) to assess NAP implementation based on these indicators, and
- 3) to formulate recommendations for the next period of ERA implementation.

The analysis is based on multiple data sources which complement each other:

The starting point for GENDERACTION was a document analysis – in most cases, the NAPs. A list of documents included in the analysis is provided in chapter 9.1.

In autumn 2017, an online survey on NAP development and implementation was carried out among members of the Standing Working Group on Gender in Research and Innovation (SWG GRI). The results of this survey are provided in D3.1.

In early 2019, the survey was updated using the “Progress Tool” developed by the GPC Task Force for the analysis of the implementation of Priority 2a. Members of the SWG GRI received a short e-mail questionnaire and the progress tool adapted for Priority 4 measures. A total of 21 countries provided information on the current state of their NAP implementation.

To complement the available data, the SWG GRI agreed that GENDERACTION WP3 could conduct expert interviews with its members regarding NAP development and implementation. In preparation for a meeting of the SWG GRI in April 2019 in Brussels, three preliminary questions were sent to its members, one of which asked if they would agree to participate in an interview.² Representatives of 12 countries agreed to do so. They were all subsequently contacted, and in the end, nine inter-

views were carried out from May to July 2019 (see Appendix 10.1.3 for a list of interviewees).

The second report on NAP implementation starts with a description of the ERA process and the manner in which gender equality is addressed in different phases of ERA development (Chapter 2). In a next step, the GENDERACTION approach to monitoring and the set of indicators used to assess NAP implementation is presented (Chapter 3). The Priority 4 implementation status is then analysed using indicators referred to in the ERA progress reports (Chapter 4). This is followed by an analysis of NAP implementation based on the data collected in GENDERACTION (Chapter 5). Expert interviews conducted with stakeholders involved in NAP implementation complete the picture indicated by the survey data, aggregate data (e.g. She Figures) and relevant documents (Chapter 7). Finally, the main results are summarised and used as the basis for the formulation of recommendations for the next ERA Roadmap (Chapter 8).



- 2 The other two questions were “What is missing in the progress tool to give a comprehensive picture of NAP implementation in your country?” and “What would you see as the main development regarding gender in R&I in your country since 2016?”. 12 out of 30 ERA countries provided information before or after the meeting.



Gender Equality in the European Research Area

The political concept of the European Research Area (ERA) was first launched in 2000 with the publication of the European Commission's "Towards a European Research Area" Communication (EC 2000). The main objectives of this initiative were to boost Europe's competitiveness, to improve the coordination of research activities on both a national and a European level, to develop human resources and to increase the attractiveness of European research to the best researchers from all over the world. The EU's Framework Programme for Research, Technological Development and Demonstration was considered to be the most important instrument for the implementation of the European Research Area.

In 2007, progress in the development of the ERA was assessed and new perspectives presented in the form of a Green Paper (EC 2007). The Green Paper underlines the importance of ERA for the European Union to become a leading knowledge society. It also confirms the main ERA objectives. "The ERA concept encompasses three inter-related aspects: a European 'internal market' for research, where researchers, technology and knowledge can freely circulate; effective

European-level coordination of national and regional research activities, programmes and policies; and initiatives implemented and funded at European level" (EC 2007: 5). In December 2008, the Competitiveness Council formulated a 2020 Vision for the European Research Area which was endorsed by the European Council (Council of the European Union 2008). The outlined vision of the ERA is based on six dimensions, namely: realising a single labour market for researchers; developing world-class research infrastructures; strengthening research institutions; sharing knowledge; optimising research programmes and priorities; and opening to the world through international cooperation in science and technology (S&T).

A third phase in the development of the ERA began in 2012 with the new Communication and Council Conclusions (EC 2012), which led to the adoption of the ERA Roadmap 2015-2020 (ERAC 2015). The purpose of this roadmap is to identify a limited number of top priority actions that will have the biggest impact on Europe's research and innovation whilst fully recognising that national research and innovation systems across

Europe have different characteristics and specificities. It is up to the Member States to specify the strategies and actions for taking ERA further at the national level that are best suited to the structures and dynamics of their national research and innovation systems (Council of Europe 2015: 3). The ERA Roadmap also makes provisions for monitoring in conjunction with ERA Progress Reports. This monitoring should be kept as lean as possible to avoid additional administrative burdens yet also be clear and workable at both national and EU level.

The ERA Roadmap defines six priorities for policies to build ERA at the national level:

- Priority 1 – Effective national research systems
- Priority 2a – Jointly addressing grand challenges
- Priority 2b – Making optimal use of public investments in research infrastructure
- Priority 3 – An open labour market for researchers
- Priority 4 – Gender equality and gender mainstreaming in research
- Priority 5 – Optimal circulation and transfer of scientific knowledge
- Priority 6 – International cooperation.

The gender dimension in science and research has been addressed in several ways in this process. For instance, the Communication “Towards a European Research Area” explicitly addresses the underrepresentation of women “There are not enough women in research in Europe” (EC 2000: 17). The need for action to increase the share of women in science and research is justified by the leaky pipeline phenomenon (decreasing female participation in science compared to the share of women among graduates) as well as discriminatory mechanisms and their anticipation by women. The Communication also refers to the EC Communication “Women in Science” (EC 1999), a policy document which formulates the aim to “encourage women to take part in European research” (EC 1999: 3). The European Commission (EC) already envisaged the development of a coherent approach to increase the share of women in its Fifth Framework Programme (FP5), which included the Marie Curie scholarships as well as corresponding advisory groups and assessment/monitoring panels aimed specifically at promoting

research by, for and on women. In other words, its goal was not only to increase female participation in research but also to strengthen gender issues in research content (“research for women” and “research on women”).

The aforementioned Green Paper also calls for initiatives to increase the share of women in science and research. “It is thus essential to establish a single and open European labour market for researchers, ensuring effective ‘brain circulation’ within Europe and with partner countries and attracting young talent and women into research careers.” (EC 2007: 11) In contrast to the EC Communication “Women in Science” (EC 1999), the Green Paper does not address the gender dimension in research content.

In the third phase of the development of the ERA (see, e.g., EC 2012; Council of Europe 2012), the focus of the gender dimension in the ERA is widened and formulated more explicitly. Gender equality and gender mainstreaming in research are defined as one of six ERA priorities “to end the waste of talent which we cannot afford and to diversify views and approaches in research and foster excellence” (EC 2012: 4). Priority 4 now defines three dimensions of gender equality: (1) the representation of women in science in general, (2) the representation of women in decision-making positions as well as structural and cultural barriers which lead to an underrepresentation of women in decision making, and (3) the integration of gender in research content. In the years that have since followed, the European Commission and the Council of Europe refer to this definition of gender equality – e.g. in the Council’s conclusions on the European Research Area Roadmap (2015) or in the recent ERA Progress Report (EC 2019).

The European Research Area and Innovation Committee (ERAC) is a main actor in the ERA context. ERAC is a strategic policy advisory committee that advises the Council, the Commission and Member States on the full spectrum of research and innovation issues in the framework of the governance of the European Research Area. Its mandate was decided by the Council in October 2015. The Committee is co-chaired by the Commission and an elected representative from a Member State. The Council provides its secretariat. ERAC members are the European

Commission and the EU Member States. Non-EU countries which are associated to EU research and innovation programmes may participate as observers in its activities.³

ERAC currently has three Standing Working Groups: Open Science and Innovation, Human Resources and Mobility, and Gender in Research and Innovation. The Committee can also meet in two dedicated configurations, which were established by the Council and are chaired by an elected representative of an EU Member State: (1) the High Level Group on Joint Programming (GPC), which contributes to the preparation of the debates and decisions of the Competitiveness Council on joint programming and (2) the Strategic Forum for International S&T Cooperation (SFIC), which advises the Council and the Commission on the implementation of a European Partnership in the field of international scientific and technological cooperation.

In the following, we will focus on the question of how gender equality is considered by the Member States when implementing the ERA Roadmap. Our analysis is based on key ERA documents at European and national level, a survey of national stakeholders involved in the development and implementation of the national ERA Roadmaps or NAPs as well as a series of interviews with experts. It is also based on the assumption that sustainable gender equality policies in the ERA require a shared understanding by all stakeholders involved in NAP implementation of the problem to be addressed and the main objectives. Such a common understanding is the result of a discursive process. Vice versa, the lack of a common definition of problems and objectives can be interpreted as a lack of a discourse. We understand discourse to be “thematically connected and problem-related semiotic (for example oral or written) occurrences that relate to specific semiotic types, which serve particular political functions” (Reisigl 2008: 99; see also Wodak 2008). Hence, we start from the position that problems are not given but rather social constructs (see Bacchi 2009).

Applied to our context, this means that “gender mainstreaming”, “gender analysis” and “gender equality” are discursively constructed forms of social knowledge. Equality policies are part of this productive process, for example

with regard to the way the problem of gender inequality is presented and which solutions are proposed (Bacchi 2000). This is why we focus in our analysis of the implementation of NAPs on how the gender equality problem has been represented in policy making (both in documents and policies).



- 3 The following countries currently have observer status: Albania, Armenia, Bosnia and Herzegovina, Faroe Islands, North Macedonia, Georgia, Iceland, Israel, Moldova, Montenegro, Norway, Serbia, Switzerland, Turkey, and Ukraine.

3 >

Monitoring of Priority 4

Before we go on to present the results of our empirical analysis, we first outline the GENDER-ACTION approach to monitoring as well as the proposed set of indicators for monitoring the implementation of ERA Priority 4.

3.1 GENDERACTION approach to monitoring

As already discussed in our first report on national roadmaps and mechanisms in ERA Priority 4 (D3.1), we assume that efficient and effective gender equality policies are developed and implemented following a complete policy cycle (May, Wildavsky 1978; Bergmann, Pimminger 2004).

This implies that gender equality policy objectives and priorities must be formulated based on an analysis of the status quo with regard to the three gender equality dimensions (gender analysis). The

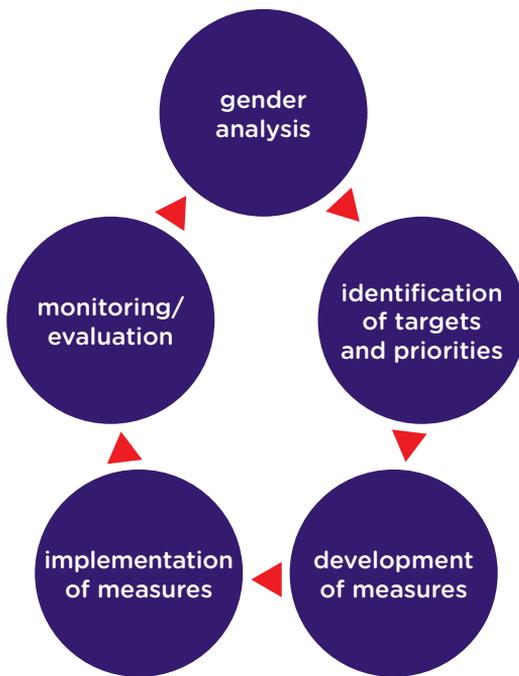
next steps are to design and implement measures to achieve the desired objectives. The implementation of these measures should constantly be monitored. Ideally, this monitoring should be accompanied by an evaluation of the measures – either in parallel with the implementation to identify starting points for further development of the measures or ex-post to measure their effectiveness.

For this report, we define monitoring in line with the definition proposed by Markiewicz and Patrick (2016: 12) as: “the planned, continuous and systematic collection and analysis of program information able to provide management and key stakeholders with an indication of the extent of progress in implementation, and in relation to program performance against stated objectives and expectations.”⁴



4 This does not include a systematic determination of the quality and value of the policies or measures implemented or their contribution to the achievement of goals and objectives, which would be the task of an evaluation.

**Figure 1:
Complete Policy Cycle**



Source: based on May, Wildavsky 1978

3.1.1 Purpose of monitoring

Continuous monitoring generally pursues four goals which together support the efficient use of resources:

- Monitoring should provide an overview of current developments in the context of the policy of interest. In the Priority 4 context, relevant indicators refer to the number of higher education institutions (HEIs) and the development in the total number of professors and researchers. This information is necessary to interpret the monitoring indicators.
- The core function of the monitoring is to provide information about policy implementation (e.g. number of policies implemented, number of participants in training programmes and share of women, number of beneficiaries of subsidies and share of women, budget spent

on specific measures). This information makes the accountability of stakeholders transparent and provides first indications of suboptimal implementation.

- In an ideal case, the indicators used in a monitoring system also provide the basis for policy steering. This would require that targets for specific policies are formulated in a way that corresponds to the indicator(s) (e.g. when the performance agreement between a government ministry and a university contains the target to increase the share of women in professorships, and the monitoring includes a corresponding indicator).
- The information described helps to identify deviations from planned implementation and consequently the need to adapt policies or their implementation at an early stage.

3.1.2 Principles of monitoring

Efficient monitoring should be based on the following principles (see also Wroblewski et al. 2017).

In general, monitoring systems are **based on empirical data** which is available on a regular basis and easily accessible. In most cases, monitoring indicators consist of quantitative indicators derived from the main objectives in a policy field. However, objectives cannot always be formulated in a quantifiable manner. In such cases, qualitative indicators should be included.

A monitoring system should **include indicators which describe the context** of the policy or measure, the **expected output or outcome** of a policy as well as its **implementation**. Examples of context indicators in the field of national gender equality policy in R&I are the numbers of male and female researchers or the number of research institutions. An example of an indicator which describes the expected output is the share of women among newly-appointed professors. Potential outcome indicators are the share of female professors or the share of women in decision-making bodies.

Indicators focusing on the implementation of policies should represent the number of participants in programmes, the budget spent on programme implementation or the number of complaints addressed to an equality officer. Indicators

focusing on the implementation of policies should be derived from a logic model or a programme theory that has been explicitly formulated for the concrete policy.⁵

Monitoring indicators should be developed with the participation of the main stakeholders. The aim is to establish an **agreed set of indicators** which all relevant stakeholders accept as meaningful and relevant. This agreed set of indicators should likewise be based on a data source which all stakeholders define as reliable.

The agreed set of **indicators** should be **available at regular intervals** (e.g. yearly or monthly). The timing should be linked to the planned intervals for presentation and discussion of monitoring results (e.g. in the form of annual or monthly reports).

Monitoring results should be **presented and interpreted on a regular basis**. This presentation will both contribute to a gender equality discourse in the concrete policy field and provide the basis for policy learning. Monitoring results allow the overall political strategy and the concrete policy design to be reviewed. They also facilitate the assessment of progress towards the planned outcome. If deviations from the expected outcome are identified, an analysis of the underlying mechanisms and causes should be carried out. Lessons learned (success stories as well as failures) should also be identified.

Finally, a monitoring system should be seen as a **“living tool”** which has to be adapted when policies are changed.

3.1.3 Level of ERA monitoring

In line with the principles outlined above, the monitoring of progress towards the ERA should represent two different levels: (1) the aggregate level and (2) the level of the implementation of the NAP or concrete policies.

Relevant aggregate indicators are provided on a regular basis by the She Figures. The She Figures contain context indicators (e.g. size of sectors in R&I – university, state and business enterprise) as well as potential outcome indicators (e.g. share of women in Grade A). Three She Figures indicators are also used in the ERA Progress Report for Priority 4: The EMM headline indicator “Share of women in Grade A positions in the higher educa-

tion sector” and the supporting indicators “Share of female PhD graduates” and “Gender dimension in research content”. This means that the EMM indicators focus on two of three ERA gender equality objectives, namely female representation in Grade A and among PhD graduates as well as gender in research content. **The second gender equality objective – abolishing structural barriers for careers of women – is not considered.**

Furthermore, **the existing monitoring of ERA progress does not consider the implementation of NAPs or concrete policies.** As a consequence, the implementation of NAPs or policies remains a black box. Due to a lack of information, a positive development in the EMM indicators is interpreted as a consequence of successful gender equality policies. To avoid a misleading interpretation of developments, GENDERACTION advocates a **combined approach** using indicators that focus on both the aggregate and implementation levels.

In the following section, we propose a set of indicators to measure progress towards gender equality. Some of these indicators are taken from the She Figures, while others require primary data collection.



- 5 A logic model should indicate the goal of a policy (intended impact), then the changes (outcomes) that need to be made to achieve that goal, then all the things that need to be delivered (outputs) to bring about those changes and the activities that need to be carried out in order to ensure that the planned outputs are delivered. For further information, see W.K. Kellogg Foundation (2004).

3.2

Proposed set of indicators

A comprehensive monitoring system for NAP implementation should consider indicators at the aggregate level for the three main gender equality objectives as well as indicators which focus on the implementation of NAPs or concrete policies. We therefore propose the inclusion of additional indicators at the aggregate level (see Wroblewski et al. 2019) – such as the share of female researchers to draw more attention to the non-university sector – as well as indicators for the second ERA gender equality objective (abolishment of structural barriers for women’s careers).

GENDERACTION also proposes the inclusion of **qualitative indicators for NAP implementation** in the monitoring and derives relevant qualitative indicators from an analysis of NAP documents:

- NAP contains context analysis (yes/no)
- Dimensions addressed by context analysis
- Objectives formulated in NAP (yes/no)
- Dimensions addressed by objectives
- Concrete policies/measures formulated for ERA objective 1 (yes/no)
- Concrete policies/measures formulated for ERA objective 2 (yes/no)
- Concrete policies/measures formulated for ERA objective 3 (yes/no)
- Links between other ERA priorities and Priority 4 (for each priority: yes/no)

These indicators are in line with the complete policy cycle approach as well as the criteria for good practice NAPs which have been developed within the GENDERACTION project (see Wroblewski et al. 2018).

To measure the progress of NAP implementation, the ERAC Working Group on Priority 2a developed a progress tool which counts policies/measures that are mentioned in the NAP and are already implemented. For each measure implemented, the status is also mentioned (on time, with delay, terminated).

Good practice NAPs

- are based on an empirical baseline assessment,
- contain objectives and targets which are derived from the baseline assessment,
- formulate objectives, targets and concrete measures consistently,
- consider gender in all priorities (gender mainstreaming), thus interlinking Priority 4 with other priorities,
- include concrete budgets and resources,
- define responsibility for the implementation of NAPs or specific actions (the responsibility for concrete measures should be assigned to specific stakeholders),
- include a responsibility for the coordination of the six priorities as well as of concrete measures within one priority,
- use consultation in developing NAPs (stakeholder involvement),
- include concrete deadlines for measures and actions, and
- include a description of monitoring and/or planned evaluation activities.

A main shortcoming of this approach is that all policies/measures count equally. In other words, a comprehensive policy aimed at structural change in universities with a significant budget and a prize for women researchers which is awarded once a year both have the same weight in the monitoring.

To assess the significance of such policies or measures, GENDERACTION developed a set of criteria to identify good practice measures (see Wroblewski et al. 2018).

We therefore propose to complement the qualitative indicators on NAP implementation with the number of good practice policies/measures.

Table 1: Aggregate indicators

Indicator	Definition	Source
Objective 1 – Increasing female participation in R&I		
Share of women researchers	This indicator represents the share of women researchers, broken down by country, in the researcher population in all sectors of the economy.	Eurostat – Statistics on research and development, She Figures
Share of women in Grade A positions in the higher education sector	This indicator enables the tracking of the progress made with regard to the presence of women at the highest level of academia.	Women in Science database, DG Research and Innovation, ERA progress report
Share of female PhD graduates	This indicator pertains to Priority 4 (and relates to gender balance in career progression) and measures the graduation rate for women at the highest level of tertiary education. Its aim is to characterise the rate and progress of the graduation of women from doctoral programmes.	Eurostat data
Objective 2 – Structural change		
Share of female heads of institutions in the higher education sector	This indicator represents the number of female heads of institutions in the higher education sector (HES) for a given year.	Women in Science database, DG Research and Innovation; She Figures
Glass Ceiling Index	The Glass Ceiling Index (GCI) is a relative index comparing the share of women in academia (grades A, B and C) with the share of women in top academic positions (grade A positions; equivalent to full professors in most countries) in a given year. The GCI can range from 0 to infinity. A GCI of 1 indicates that there is no difference between women and men in terms of their chances of being promoted. A score of less than 1 means that women are more represented at grade A level than in academia in general (grades A, B and C) and a GCI score of more than 1 indicates the presence of a glass ceiling effect, i.e. women are less represented in grade A positions than in academia in general (grades A, B and C). In other words, the higher the GCI value, the stronger the glass ceiling effect and the more difficult it is for women to move into a higher position.	Women in Science database, DG Research and Innovation; She Figures
Share of RPOs that have adopted a gender equality plan	Using ERA survey data, this indicator presents the share of respondent RPOs who indicated that they had adopted a gender equality plan in a given year.	HEI and PRO surveys; She Figures 2018 (MoRRI project), She Figures 2015 (ERA Survey 2014)
Share of women on boards, members and leaders	This indicator shows the extent to which women are involved in top decision-making committees which have a crucial impact on the orientation of research in a given year.	Women in Science database, DG Research and Innovation; She Figures
Objective 3 – Gender dimension in research content		
Gender dimension in research content (2007–2014)	This indicator relates to the share of a given country's scientific production (measured by the number of peer-reviewed scientific publications by full counting) in which a gender dimension has been identified in the research content relative to the same share at world level. The resulting indicator is a specialisation index, whereby a score above 1 means that a country is specialised (i.e. puts more emphasis on the gender dimension in its research output relative to the score for the world as a whole), while a score below 1 means that it is not specialised relative to the world as a whole.	Computed by Science-Matrix using WoS data (Clarivate Analytics)

Good practice policies and measures

- are based on an empirical baseline assessment,
- explicitly aim to contribute to at least one of the three main ERA gender equality objectives,
- formulate concrete targets and target groups,
- are based on a theory of change/programme theory (a formulated set of assumptions why and how the policy should reach its targets and target groups),
- involve relevant stakeholders in the development of the policy/measure,
- are provided with sufficient and sustainable funding,
- produce results which are sustainable and significant (in terms of coverage, resources, timeframes, etc.),
- develop a dissemination/communication strategy (what has been done, what has been achieved, what worked, what didn't work), and
- are monitored or evaluated on a regular basis with regard to their implementation status and impact.

4 >

State of implementation regarding Priority 4

4.1

State of implementation of Priority 4 based on aggregate indicators

The most important indicator for measuring progress regarding ERA Priority 4 is the share of women in Grade A positions (the “headline indicator”). According to this headline indicator, the top group (Cluster 1) consists of the following EU Member States: Romania, Latvia, Croatia and Lithuania. Of these countries, Lithuania and Romania did not formulate a gender equality strategy (Priority 4) in their NAPs. Countries which score highest in the headline indicator also achieve an above-average score in at least one of the supporting indicators. The following countries also achieve an above-average score and constitute Cluster 2: Bulgaria, Finland, Slovenia and Norway.

The top group for the supporting indicator – the share of female PhD graduates – consists of the following EU Member States: Slovenia, Cy-

prus, Latvia and Lithuania. A further eight EU Member States also achieve an above-average score for this indicator and constitute Cluster 2: Portugal, Croatia, Romania, Estonia, Poland, Bulgaria, Slovakia, Italy and Finland.

Romania, Slovenia and Slovakia form the top group of EU Member States for the second supporting indicator – gender in research content. The group of countries in Cluster 2 is composed of Hungary, Portugal, Estonia, Lithuania, Sweden, Croatia, Norway, Finland, Denmark, Luxembourg, Spain, Malta and Bulgaria.

Seven countries achieve an above-average score and are placed in Cluster 1 or 2 for all three indicators: Bulgaria, Croatia, Finland, Latvia, Lithuania, Romania and Slovenia (see also Table 6 in Chapter 10.2).

**Table 2:
EMM indicators for Priority 4**

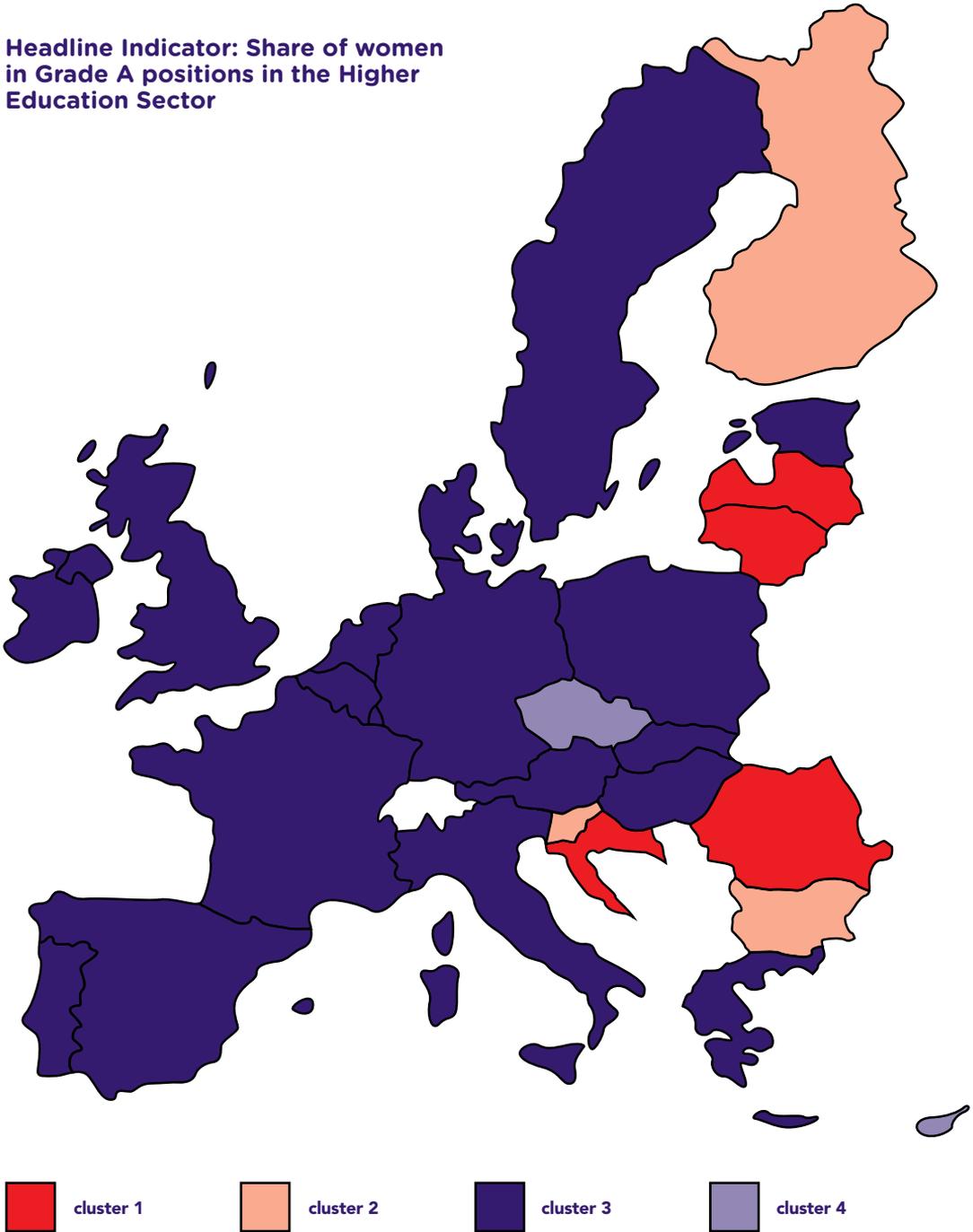
	Grade A (2016)	PhD (2016)	Publ (2014)
EU28	0.24	0.48	1.05
AT	0.23	0.42	1.02
BE	0.18	0.47	0.95
BG	0.37	0.53	1.07
CY	0.13	0.60	0.88
CZ	0.15	0.43	0.91
DE	0.19	0.45	0.89
DK	0.21	0.48	1.10
EE	0.24	0.54	1.27
EL	0.22	0.49	0.92
ES	0.21	0.51	1.08
FI	0.29	0.52	1.16
FR	0.22	0.45	0.73
HR	0.41	0.55	1.24
HU	0.20	0.47	1.51
IE	0.21	0.48	0.62
IT	0.22	0.52	1.04
LT	0.39	0.58	1.26
LU	0.17	0.40	1.10
LV	0.41	0.58	0.98
MT	0.21	0.41	1.08
NL	0.19	0.49	1.05
PL	0.24	0.54	1.01
PT	0.26	0.55	1.50
RO	0.54	0.55	2.72
SE	0.25	0.45	1.25
SI	0.29	0.61	2.21
SK	0.25	0.52	1.65
UK	0.26	0.46	1.03

Grade A = Share of women in Grade A positions in the higher education sector; PhD = Share of female PhD graduates; Publ = Gender dimension in research content; pattern code refers to the clusters in Figure 2.

Source: ERA Progress Report 2018 (EC 2019a)

**Figure 2:
EU countries by EMM Cluster:
headline indicator**

**Headline Indicator: Share of women
in Grade A positions in the Higher
Education Sector**



Source: ERA Progress Report 2018.

Table 3:
Additional indicators at aggregate level

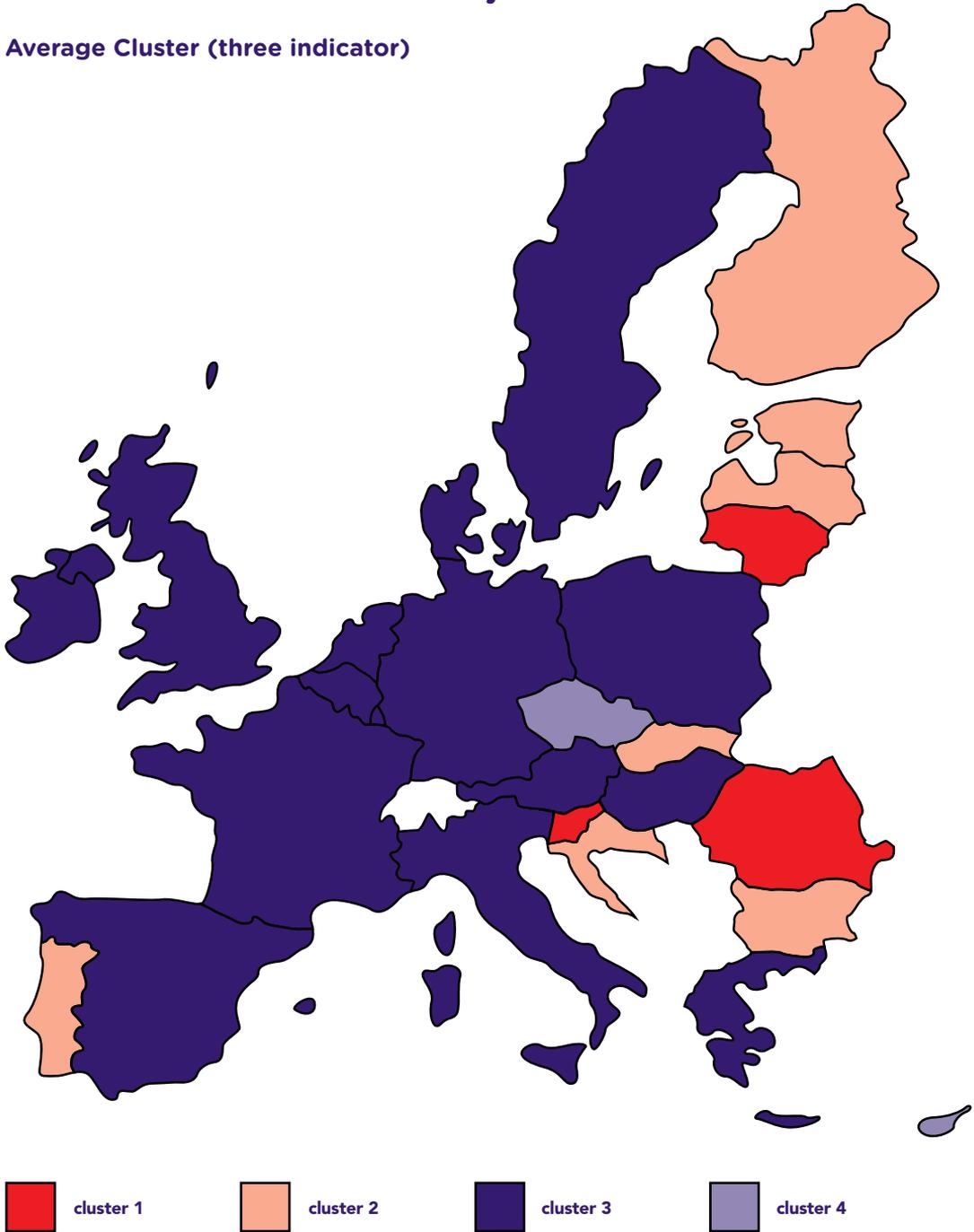
	Heads of HEIs (2017)	GCI (2016)	Boards	RPOs with GEPs
EU28	0.22	1.64	0.27	0.56
AT	0.26	1.55	0.38	0.74
BE	0.21	1.74	0.19	0.83
BG	0.15	1.16	0.46	0.14
CY	0.10	2.60	0.13	0.50
CZ	0.15	–	0.17	0.14
DE	0.18	1.77	0.23	0.93
DK	0.27	1.65	0.33	0.50
EE	0.30	/	0.15	0.00
EL	0.11	1.42	0.17	0.50
ES	0.08	1.85	0.39	0.75
FI	0.12	1.53	0.45	0.79
FR	0.12	1.63	0.36	0.82
HR	0.31	1.23	0.12	0.20
HU	0.17	1.94	0.25	0.39
IE	0.17	2.16	0.44	0.60
IT	0.24	1.68	0.20	0.39
LT	0.33	1.42	0.31	0.00
LU	0.00	1.62	0.53	–
LV	0.37	1.35	0.32	0.00
MT	0.20	1.08	0.38	0.00
NL	0.18	1.70	0.33	0.44
PL	0.18	1.78	0.24	0.22
PT	0.29	1.69	0.30	0.25
RO	0.16	1.04	0.50	0.20
SE	0.42	1.59	0.52	0.95
SI	0.32	1.39	0.42	0.22
SK	0.17	1.74	0.23	0.13
UK	0.24	1.63	---	0.91

Heads of HEIs = Share of female heads of institution in the higher education sector; GCI = Glass Ceiling Index; Boards = Share of women on boards, members and leaders; RPOs with GEPs = Share of RPOs that have adopted gender equality plans; pattern code refers to the clusters in Figure 2.

Source: She Figures 2018.

Figure 3:
EU countries by EMM Cluster: average
of the three indicators for Priority 4

Average Cluster (three indicator)



Source: ERA Progress Report 2018.

However, the picture changes when we expand the picture to include indicators that focus on structural barriers for female careers. For instance, countries like Bulgaria and Romania, which are in the top group for the share of women in Grade A positions, score below the EU average for female participation in top management (Heads of HEIs). In contrast, countries like Austria, Denmark or Sweden score above the average for female participation in top management but demonstrate only slow progress for the headline indicator (share of women in Grade A positions). A similar result is obtained when we consider the share of women on boards. Luxembourg, Sweden, Romania, Bulgaria, Finland and Ireland score highest on this indicator. Of these, only Romania features in Cluster 1 for the share of women in Grade A positions.

The countries in Cluster 1 or Cluster 2 for the headline indicator score below the average for the implementation of gender equality plans (GEPs) in RPOs. This suggests that they do not see the need for GEPs since the share of women in Grade A positions in their countries is already above average. This interpretation is, in fact, a reduction of gender equality to one single dimension – female representation. The only exception here is Finland, which scores high for both indicators (headline indicator and implementation of GEP). In several countries, three out of four of RPOs have a GEP (Austria, Belgium, Germany, Spain, Finland, France, Sweden and the UK).

The difference between those countries which score high for the headline indicator and those in which a majority of RPOs have GEPs supports the interpretation that these represent different gender equality dimensions. To demonstrate this discrepancy, the Gender Equality Index for the whole country (EIGE 2017) is considered as a relevant context indicator. The headline indicator (women in Grade A positions) is correlated with the Gender Equality Index (which represents the level of gender equality in several fields).

Figure 4 shows the Gender Equality Index for each EU Member State as well as the EU average. All EU Member States in Cluster 1 for the EMM headline indicator for Priority 4 (share of women in Grade A positions) score below the average on the Gender Equality Index.

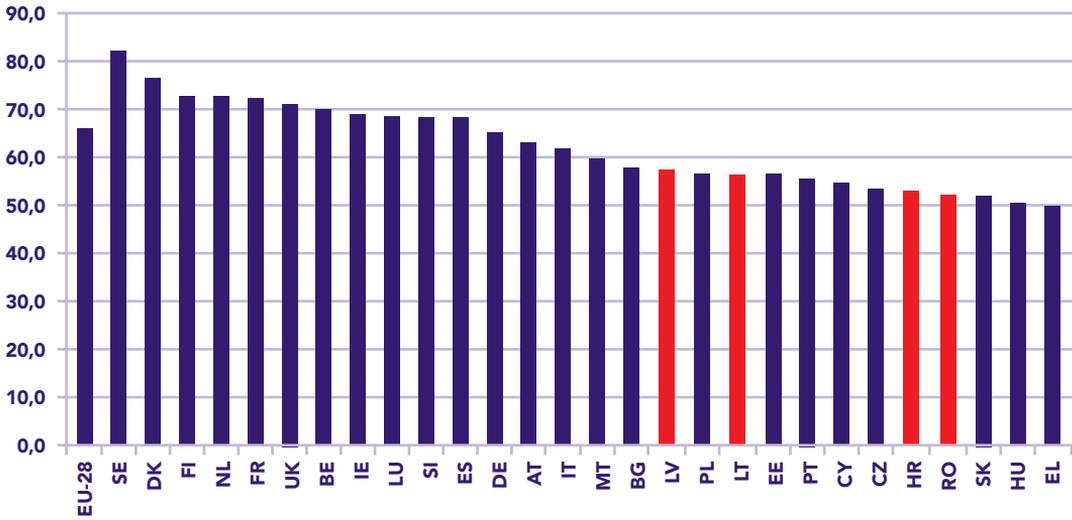
Figure 5 shows the scatter plot of the Gender Equality Index (GEL_total) and the EMM headline indicator (share of women in Grade A positions) for each

The **Gender Equality Index** is a comprehensive measure for assessing the general state of the art and for monitoring progress in gender equality across the EU over time. Hence, it provides a context indicator for gender equality in R&I. The EIGE Gender Equality Index relies on a conceptual framework that embraces different theoretical approaches to gender equality and integrates key gender equality issues within the EU policy framework. The index measures gender gaps and takes into account the context and different levels of achievement of Member States within a range of relevant policy areas: work, money, knowledge, time, power and health. It also offers insights into violence against women and intersecting inequalities (for more information see EIGE 2017).

EU Member State. The broad distribution of points shows that there is no or only a minor correlation between the two indicators. The Pearson Correlation amounts to -0.280 , which indicates a negative relation between the two indicators: When the share of women in Grade A positions increases, the value of the overall Gender Equality Index decreases. A possible explanation for this negative relationship could be that a Grade A position is not attractive enough for men, who can find alternative research positions in the labour market (see, e.g., Latvian ERA Roadmap 2016).

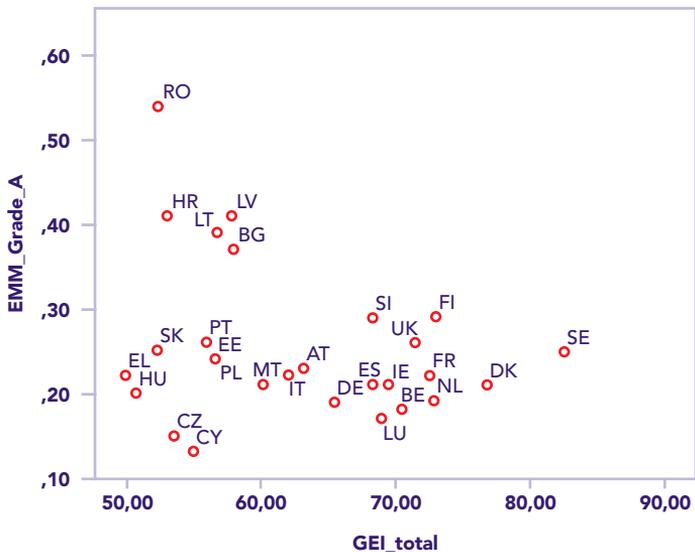
In contrast, the Gender Equality Index is significantly and positively correlated with the share of women on boards and the share of RPOs with GEPs. Hence, countries with a high level of gender equality in general are more likely to have more women on boards in R&I, i.e. in positions of power. Furthermore, it is more likely that an RPO in these countries will have a GEP. The correlation between the Gender Equality Index and the share of women on boards is 0.531 ; the correlation between the Gender Equality Index and the share of RPOs with GEPs is 0.683 . This also indicates that the headline indicator (women in Grade A positions), which refers to the first of the three ERA gender equality dimensions, only affords a partial picture of gender equality in R&I. The second ERA gender equality dimension (structural change) seems to contribute more to gender equality than female representation alone.

Figure 4:
Total Gender Equality Index 2015



Source: EIGE 2017: 89.

Figure 5:
Scatter plot of Gender Equality Index and EMM headline indicator (women in Grade A positions)

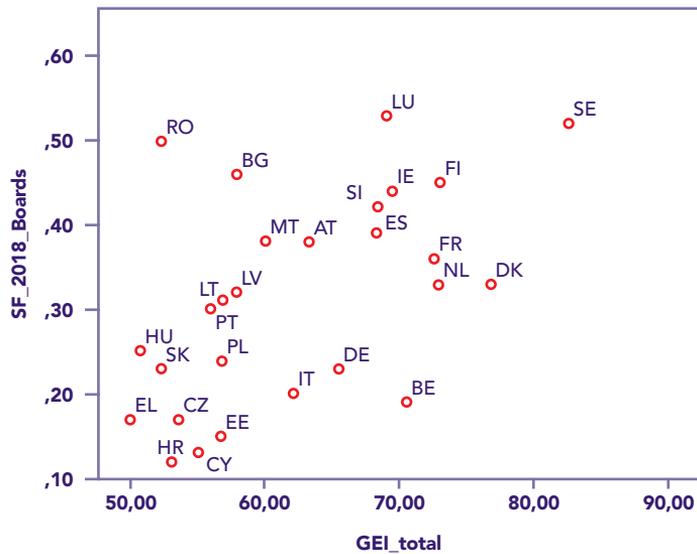


Source:
 ERA Progress
 Report 2018,
 EIGE 2017.

The main argument to support the development of comprehensive gender equality policies based on the three-dimensional ERA gender equality construct is provided by the correlation of the EMM indicators for NAP Priority 1 and the Gender Equality Index. The correlation between the Gender

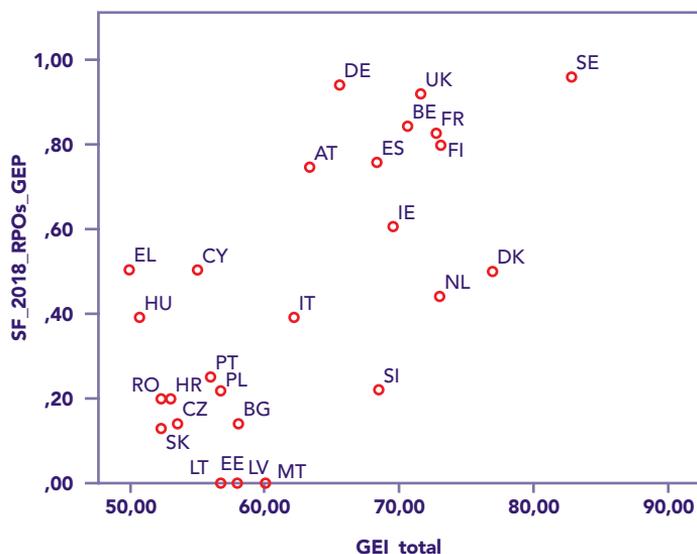
Equality Index and the European Innovation Scoreboard Summary Innovation Index is 0.869, and the correlation with the Adjusted Research Excellence Indicator is 0.846. Hence, **the higher a country scores on the Gender Equality Index, the higher its innovation potential** (see also SWG GRI 2018).

Figure 6: Scatter plot of Gender Equality Index and the share of women on boards



Source:
She Figures 2018,
EIGE 2017.

Figure 7: Scatter plot of Gender Equality Index and share of RPOs with GEPs

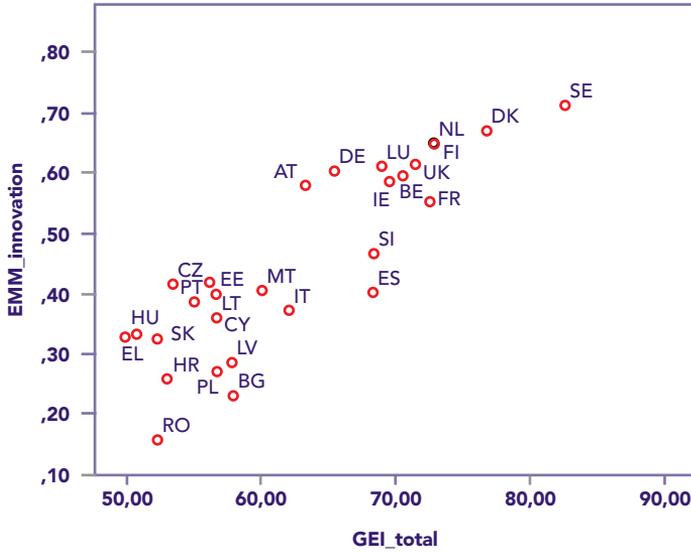


Source:
She Figures 2018,
EIGE 2017.

Similarly, the correlation between the share of RPOs with GEPs and the innovation indicators are significant and positive (the correlation between the share of RPOs with GEPs and innovation is 0.732 and the correlation with excellence is 0.751). This means that an increasing share of RPOs with GEPs

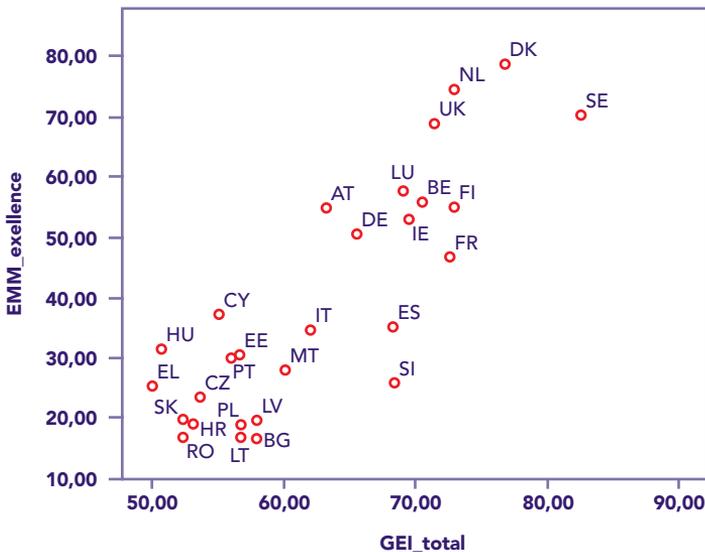
is positively correlated with innovation potential. In contrast, the correlation with the EMM headline indicator for Priority 4 (share of women in Grade A positions) and the innovation and excellence indicators are negative (-0.540 for innovation and -0.471 for excellence).

Figure 8: Scatter plot of Gender Equality Index and European Innovation Scoreboard Summary Innovation Index



Source: ERA Progress Report 2018, EIGE 2017.

Figure 9: Scatter plot of Gender Equality Index and Adjusted Research Excellence Indicator



Source: ERA Progress Report 2018, EIGE 2017.

4.2

Differences between EU15 and EU13 countries

The descriptive analysis of the status quo of gender equality in European countries reveals significant differences between EU15 and EU13 countries. Most of the “newer Member States” (EU13), which joined the EU from 2004 onwards, are characterised by high female participation in R&I. The average share of women in Grade A positions in EU13 countries is 29.5% compared to 22.1% in EU15 countries. The gap in the shares of women among PhD graduates is smaller but significant: while the average share of women among PhD graduates is 53.2% in EU13 countries, the average for EU15 is 47.6%. Hence, the average for the indicator “Gender dimension in content” also differs: 1.37 for EU13 and 1.03 for EU15 countries.

Compared to these significant differences between EU13 and EU15 countries for the EMM indicators, the differences between indicators which address the second dimension of gender equality – share of female heads of HEIs, Glass Ceiling Index or share of women on boards – are not significant.

Significant differences only arise for the share of RPOs with GEPs. Many more RPOs in EU15 countries implement GEPs than those in EU13 countries (67.1% versus 16.5%).

The insignificant differences regarding female representation in top management and boards as well as the Glass Ceiling Index indicate that gender equality policies compensate for the lower representation of women in Grade A positions. Moreover, the significant differences regarding RPOs with GEPs support the assumption that GEPs initiate structural change.

Even stronger arguments for gender equality policies are provided by the gaps between EU13 and EU15 countries for the Gender Equality Index and the innovation indicators. The average Gender Equality Index score in EU13 countries is significantly lower than its counterpart in EU15 countries. Hence, countries which are interested in increasing their innovation potential should also invest in comprehensive gender equality policies.

Table 4: Average indicators for EU15 and EU13 countries

	EU13	EU15
Share of women in Grade A positions in the higher education sector	29.5%	22.1%
Share of female PhD graduates	53.2%	47.6%
Gender dimension in research content	1.37	1.03
Share of female heads of institutions in the higher education sector*	22.4%	19.3%
Glass Ceiling Index*	1.52	1.68
Share of women on boards, members and leaders*	28.3%	34.4%
Share of RPOs that have adopted gender equality plans	16.5%	67.1%
Gender Equality Index	56.3	68.2
European Innovation Scoreboard Summary Innovation Index	0.32	0.55
Adjusted Research Excellence Indicator	23.3	52.7

* Difference in means statistically not significant (at 0.05).

Note: Average of indicators, no adjustments made.
Source: ERA Progress Report 2018, She Figures 2018.

5 >

Implementation of ERA Priority 4

5.1

Analysis based on NAP documents

The analysis of NAP implementation described above is based on the analysis of aggregate indicators. In this approach, the NAP (e.g. its strategic goals, concrete policies or measures) remains in a black box. The analysis does not consider how gender equality is defined or which objectives and concrete policies are formulated. As already mentioned, GENDERACTION developed a set of criteria to identify good practice NAPs and support the development of future NAPs.

Not all of the criteria mentioned in Chapter 3.2 will be applied to the analysis of NAP implementation because they are not addressed in the outline of the national ERA Roadmaps (ERAC 2015). Hence, our analysis of NAP documents focuses on a core set of indicators derived from the criteria for good practice NAPs:

- NAP contains a definition of gender equality – yes/no.

- NAP is based on an empirical baseline assessment (context analysis) – yes/no.
- NAP addresses ERA gender equality objective 1 – increasing female participation in R&I – in the context analysis – yes/no.
- NAP addresses ERA gender equality objective 2 – structural change – in the context analysis – yes/no.
- NAP addresses ERA gender equality objective 3 – integration of the gender dimension into research content – in the context analysis – yes/no.
- NAP formulates priorities for ERA gender equality objective 1 – yes/no.
- NAP formulates priorities for ERA gender equality objective 2 – yes/no.
- NAP formulates priorities for ERA gender equality objective 3 – yes/no.
- Priority 4 is addressed in other priorities (mainstreaming gender) – yes/no.

- Policies/measures addressing objective 1 are implemented – yes/no.
- Policies/measures addressing objective 2 are implemented – yes/no.
- Policies/measures addressing objective 3 are implemented – yes/no.

With the exception of Hungary and Slovakia, all EU countries formulated and submitted a NAP. Most countries submitted their NAP in 2016, Poland and Sweden did so later (spring 2019). France’s NAP is not available in English and has, therefore, not been included in our qualitative analysis.

It is striking that only eight out of 25 NAPs (32%) contain a **definition of gender equality**. In some cases (Austria, Cyprus, Greece, Slovenia), gender equality is defined through an explicit reference to ERA gender equality objectives. Some NAPs use an intersectional definition of gender. Denmark, for instance, defines gender as a social construct. The UK sees “gender inequality as part of diversity in general. Wider diversity issues include age, ethnicity, disability and sexual orientation.” Finland uses a multi-dimensional concept of gender (“genders”).

Four out of 25 NAPs (16%) do not contain an empirical assessment of the status quo of their gender equality policy. Ten NAPs (40%) address all three gender equality dimensions (ERA objectives) in their **context analysis**, five address two dimensions and six only address one dimension. The first objective – increasing female participation in R&I – is mentioned in almost all NAPs. The second objective – structural change – is mentioned in 18 NAPs (72%). Compared to that, the third dimension is mentioned much less frequently: only ten NAPs (40%) mention the objective to integrate the gender dimension into research content or teaching.

All but two countries which submitted a NAP also formulate **priorities regarding gender equality**. The NAPs of Bulgaria and Romania – which both score highly for the headline indicator (share of women in Grade A positions) but have low scores for innovation – do not contain any gender equality priorities. The Bulgarian NAP does not even have a section on gender equality and simply subsumes it under “Human Resources”. Romania states in its context analysis that the share of women in R&I is above the European average and that the share of female heads of RPOs is on the rise. Consequent-

ly, it sees no need for action: “This progress needs to be carefully monitored in the coming years and specific measures should be promoted in case the current positive trend is reversed.” (Romanian ERA Roadmap, p. 18)

The documents show several inconsistencies regarding context analysis and formulated priorities. Some countries discuss gender gaps in their context analysis but do not formulate corresponding priorities (Cyprus, Finland, Malta). Others do not include specific gender equality objectives in their context analysis but formulate priorities (the Czech Republic, Estonia, Lithuania, Poland).

Another inconsistency is found when countries formulate priorities in their NAPs but do not implement concrete actions in the following years. Sixteen countries (64%) take actions for all the priorities formulated in their NAP.⁶ Seven countries (28%) formulate priorities in their NAP but do not cover all of them in their defined actions (Estonia, Greece, Croatia, Ireland, Latvia, Poland, Slovenia). For more details on the implementation of policies and measures, see Chapter 5.2.

In most NAPs, gender equality is not addressed in other priorities. Thus, **gender is not mainstreamed in the NAPs**. Only ten NAPs (40%) link Priority 4 with at least one other priority.⁷ If there are links, they are mostly to Priority 3 “Open Labour Markets” (Austria, the Czech Republic, Estonia, Greece, Latvia, Poland, Sweden, the UK) or Priority 1 “Effective National Research Systems” (Greece, the Netherlands and Sweden). One NAP (the UK) mentions gender quality in Priority 2 “Jointly Addressing Grand Challenges & Making Optimal Use of Research Infrastructure”, while another (Belgium) refers to it in Priority 6 “International Cooperation”.

This initial overview does not say very much about the intensity of implementation (regarding the number of measures, quality of measures, potential impact, etc.). Hence, the following sections in this report focus on the number of concrete policies implemented as well as the number of good practice policies.



6 Austria, Belgium, Cyprus, the Czech Republic, Denmark, Germany, Spain, Finland, Italy, Lithuania, Luxemburg, Malta, the Netherlands, Portugal, Sweden, the UK.

7 Austria, Belgium, the Czech Republic, Estonia, Greece, Latvia, the Netherlands, Poland, Sweden, the UK.

**Table 5:
Qualitative indicators based on NAP
documents and GENDERACTION survey**

	NAP*	Def*	Context*			Priorities*			Links*	Implementation**		
			Obj 1	Obj 2	Obj 3	Obj 1	Obj 2	Obj 3		Obj 1	Obj 2	Obj 3
AT	yes	yes	yes	yes	yes	yes	yes	yes	yes (3)	yes	yes	yes
BE	yes	no	yes	yes	yes	yes	yes	yes	yes (6)	yes	yes	yes
BG	yes	no	no	no	no	no	no	no	no	no	no	no
CY	yes	no	yes	yes	yes	yes	yes	no	no	yes	yes	no
CZ	yes	no	no	yes	no	yes	yes	yes	yes (3)	yes	yes	yes
DE	yes	yes	yes	yes	yes	yes	yes	yes	no	yes	yes	yes
DK	yes	yes	yes	yes	yes	yes	no	yes	no	yes	no	yes
EE	yes	no	no	no	no	yes	yes	no	yes (3)	yes	no	no
EL	yes	yes	yes	yes	yes	yes	no	yes	yes (1,3)	no	no	yes
ES	yes	no	yes	yes	yes	yes	yes	yes	no	yes	yes	yes
FI	yes	yes	yes	yes	yes	no	yes	no	no	no	yes	no
FR	yes****									yes	yes	yes
HR	yes	no	yes	yes	no	yes	no	no	no	no	no	no
HU	no											
IE	yes	no	yes	yes	yes	yes	yes	no	no	yes	no	no
IT	yes	no	no	yes	no	yes	yes	no	no	yes	yes	no
LT	yes	no	no	no	no	no	yes	no	no	no	yes	no
LU	yes	no	yes	yes	no	yes	yes	no	no	yes	yes	no
LV	yes	no	yes	yes	no	no	yes	no	yes (3)	no	no	no
MT	yes	no	yes	yes	yes	no	yes	no	no	no	yes	no
NL	yes	no	yes	yes	yes	yes	yes	yes	yes (1)	yes	yes	yes
PL***	yes	no	no	no	no	yes	no	no	yes (3)	no	no	no
PT	yes	no	yes	yes	no	yes	yes	no	no	yes	yes	no
RO	yes	no	yes	no	no	no	no	no	no	no	no	no
SE***	yes	yes	yes	yes	yes	yes	yes	yes	yes (1,3)	yes	yes	yes
SI	yes	yes	yes	yes	yes	yes	yes	yes	no	yes	yes	no
SK	no									ND		
UK	yes	yes	yes	no	no	no	yes	no	yes (3,2)	no	yes	no

NAP = National Action Plan formulated; Def = NAP contains a definition of gender equality; Context = NAP contains a context analysis referring to objective 1 (increasing female participation in R&I), objective 2 (structural change) or objective 3 (integrating the gender dimension into content); Links = reference to Priority 4 in other priorities; Implementation = policies implemented for objectives 1, 2 or 3; GP = number of good practice policies.

* Based on NAP documents; ** Based on GENDERACTION survey 2017/2019 and progress tool; *** NAP released in 2019; **** Only available in French.

Source: NAP documents.

5.2

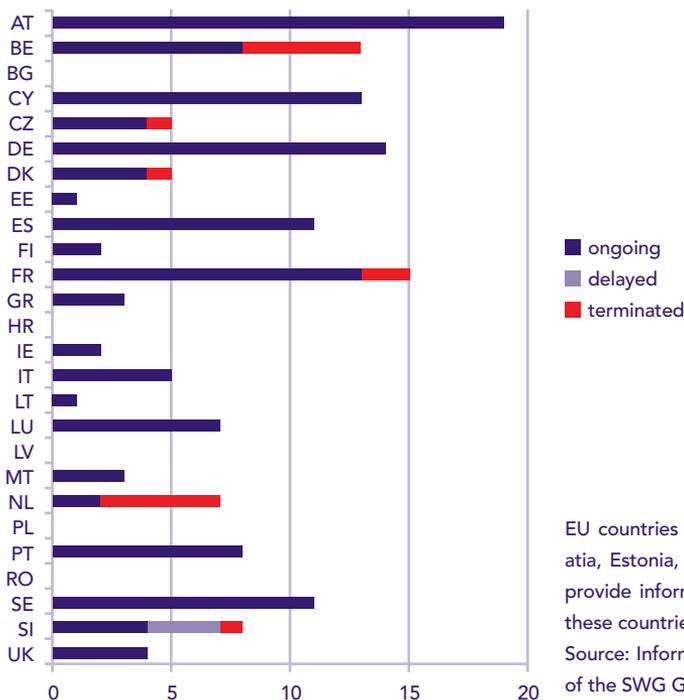
Analysis based on the adapted progress tool

The High Level Group for Joint Programming (GPC), which is responsible for Priority 2a “Jointly Addressing Grand Challenges” in the ERA Roadmap, developed a progress tool to assess activities relating to the implementation of Priority 2a. This progress tool was adapted for Priority 4 by GENDERACTION. Members of the SWG GRI provided the information in spring 2019.

Most countries who mentioned specific action(s) relating to Priority 4 also took such action(s). Greece implemented fewer measures than planned (4 instead of 9). Poland, which submitted its NAP in spring 2019, mentioned planned action(s) in the NAP but has not yet started with their implementation.

The information shown in Figure 10 does not say much about NAP implementation because no information is available on the scope or potential impact of these policies or measures. To open up this black box, GENDERACTION collected information on concrete policies and measures through a survey of members of the SWG GRI. The first GENDERACTION report contained 64 factsheets which provided information on concrete policies (D3.1). In 2019, the respondents were asked to update the available information. Internet research carried out in the course of the preparation of this report completed the information. A total of 102 factsheets are available.

Figure 10: Number of policies and measures implemented relating to NAP Priority 4



EU countries which submitted a NAP. Five countries (Croatia, Estonia, Ireland, Latvia, the United Kingdom) did not provide information for the progress tool. Information for these countries is derived from an internet search.

Source: Information in progress tool provided by members of the SWG GRI.

5.3

Good practice policies and measures

The first report on the implementation of NAP Priority 4 (D3.1) showed a broad variety of policies and measures introduced to support gender equality in R&I. They vary regarding the objectives addressed, approach, scope, resources and results. Some policies and measures have a long tradition and have been evaluated while others have been introduced recently. Furthermore, the respondents' assessment of whether a measure or policy is innovative or constitutes a good practice is based on different criteria. In some cases, recently introduced policies are defined as innovative because it is the first time that the topic is addressed by a policy or measure. In other cases, newly introduced measures with an innovative approach are not defined as good practice because no evaluation of the results is yet available. Hence, the survey results illustrate a need for a discussion of criteria for good practices. This topic was taken up in the first Mutual Learning Workshop and criteria for good practice have been defined (see chapter 3.2).

Applying these criteria 15 policies have been identified as good practices.⁸ These pol-

icies or measures illustrate the broad scope of gender equality policies and the need to tailor them specifically to the given circumstances within the framework of the described policy cycle (see chapter 3.1). This includes that effective gender equality policies are provided with sufficient resources and that are monitored or evaluated.

5.3.1 Good practice policies and measures to increase female participation in R&I (ERA gender equality objective 1)

Most countries have implemented policies aimed at increasing the share of women in R&I. The policies described below illustrate the broad variety of approaches used to pursue this goal. The Dutch "Talent Policies" are aimed directly at increasing the share of women professors by providing specific funding. Similarly, the German "Recruiting Initiative" aims at increasing the share of women in joint professorships through a quota regulation.

"Talent Policies", the Netherlands

The Westerdijk Talentimpuls is an initiative aimed at increasing the share of women professors. The goal is to appoint an additional 100 female professors on top of the 200 which formed the target in a previous agreement. Universities are encouraged to promote female assistant professors to full professors and are offered compensation for the extra salary this entails as an incentive. To cover these costs, 5 million euros in funding has been made available for this project over the next 5 years. The project has not yet been evaluated but the Dutch Association of Universities will monitor progress in the universities.



8 A policy or measure is defined as good practice when six of nine criteria are fulfilled. The number of good practices is probably underestimated due to missing information in some of the factsheets provided. The good practices are described in more detail in Chapter 10.4.

“Gender Equality Goal in Output-Oriented Budgeting”, Austria

Output-oriented budgeting describes the desired results of government-funded policies, forming a starting point for the work programmes in the federal ministries. Since all managing bodies have to take this regulation into account, this measure ensures that gender equality is now an integral part of the science and research policy agenda and is anchored in all relevant strategy and controlling instruments of the Federal Ministry of Science, Research and Economy.

The gender equality goal focuses on increasing the share of women in public university personnel as well as in management positions and professorships. A well-defined personnel structure and appropriate indicators contribute to first results: the glass ceiling index has decreased drastically and the number of women in leadership positions and on decision-making committees has increased. All in all, this measure has helped Austria to catch up with the European average. An evaluation was conducted in 2015, the results of which were subsequently published (BKA 2016).

“Programme for Women Professors of the German Federal Government and the Länder”, Germany

The Programme for Women Professors is based on the principle that a combination of two elements – increasing the number of female professors and achieving structural change – is the best approach to fixing the leaky pipeline in research and academia. Accordingly, universities which want to participate in the programme first have to submit equal opportunity plans and then receive funding for female professorships if they are evaluated positively. The two objectives are linked, since budget funds that are freed up by funded professorships must be used for equal opportunity measures.

The quality of the programme is ensured by evaluating the individual submissions according to specific conditions, e.g. whether the equal opportunity plan includes an analysis of the strengths and weaknesses of equal opportunity efforts and specific equal opportunities targets. Evaluations of the whole programme have been conducted after every phase, leading to multiple prolongations.

With an overall funding of 500 million euros from the Federal Government and the Länder, 528 professorships have been supported, numerous equal opportunities measures for female students, junior scientists and professors have been implemented, and cultural change is evident in the increased relevance of people with responsibilities for equal opportunities. Most of these measures are continued even after funding has ceased.

The Austrian “Output-oriented Budgeting” approach is a more indirect initiative as the goal to increase the share of female professors is formulated at the Federal level as well as in the government’s performance contracts with universities. The German “Programme for Women Professors” connects specific funding for female professors to the implementation of gender equality policies within a university.

The Belgian “Girls’ Day, Boys’ Day” programme and the German “National Pact for Women in STEM” focus on horizontal segregation in R&I, in particular the typical male and female degree choices. The Belgian measure addresses and endeavours to deconstruct gendered pupil stereotypes. The German initiative contains a bundle of measures aimed at increasing the interest of girls in technical professions.

“Girls’ Day, Boys’ Day”, Wallonia-Brussels Federation, Belgium

The “Girls’ Day, Boys’ Day” project organised by the equal opportunities and compulsory education services in the Wallonia-Brussels Federation is based on the assumption that gender equality in science begins in compulsory education. The programme focuses on sensitising pupils to gender stereotypes, thereby encouraging them to make career choices based on their own interests. Pupils attend a classroom presentation on deconstructing stereotypes and then meet volunteer professionals from atypical professions for girls and boys. Through this measure, the underrepresentation of women in certain fields is countered.

The target group is twofold. The project concentrates mainly on first or second-level pupils. However, since teachers also take part in the sessions, the project also helps to sensitise them and thus changes the (structural) preconditions for their future classes.

The project was first introduced in 2012 and has continually increased its number of participating schools, reaching a total of 59 schools and 212 classes in 2016. The annual budget is 59,500 euros, which covers the costs of organising the project (since the professionals are all volunteers, the cost for the growing number of participants can be kept low). Since 2013, the measure has been evaluated annually and the results published on the project’s website (<http://www.gdbd.be/index.php?id=11472>).

“National Pact for Women in STEM Careers”, Germany

The National Pact for Women in STEM Careers, initiated by the German Federal Ministry of Education and Research and partners from industry and science, aims at attracting more women to professions in STEM areas. This is to be achieved using a vast number of projects that focus on four main goals: conveying a realistic picture of STEM professions, pointing out opportunities for women in these fields, stimulating women’s interest in STEM-related degree courses and attracting female university graduates to careers in technical companies and research organisations.

Given its diverse goals, the pact targets women in different stages of their lives, namely the transitions between school and higher education and between higher education and career.

The initial results are manifold: a huge network of government, industry, science and media partners has been created and participates in an annual information exchange conference; an online platform with a project map of over 1,000 projects has been set up (<http://www.komm-mach-mint.de/>); brochures, a podcast with role models and an image database containing gender-sensitive images have been made available. With annual funding of 3 to 4 million euros, more projects will be implemented in the coming years.

5.3.2 Good practice policies and measures to support structural change (ERA gender equality objective 2)

Several policies and measures aim at initiating the development and implementation of comprehensive gender equality policies at the institutional level. However, the approaches to pursuing this goal differ. The “Gender Mainstreaming Decree” is a legal measure which requires policies and budgets in the Wallonia-Brussels Federation to be subjected to a gender test.

The approach used in Austria to support the development of gender equality policies at the institutional level is based primarily on “Performance Agreements with Universities”. Universities

commit themselves to implementing a defined set of equality policies in their performance agreements with the Federal Ministry of Education, Science and Research (BMBWF). The “Diversitas” award and its supporting structure allow successful approaches to diversity-oriented equality policies to be highlighted. In Germany, the German Research Foundation’s (DFG) member organisations have committed themselves to gender equality. A Toolbox provided by the DFG supports the development of sustainable gender equality policies in RPOs.

The policies described above indirectly aim to change the culture in science and research organisations. The Austrian Laura Bassi Centres explicitly aim to develop an alternative organisational culture to that encountered in ‘traditional’ RPOs.

“Gender Mainstreaming Decree”, Wallonia-Brussels Federation, Belgium

The Gender Mainstreaming Decree, which came into force in 2016, is based on the assumption that specific actions to promote equality are not sufficient and that the government needs to question all its systems, procedures, decisions and actions from a gender equality perspective. The measure foresees that every action taken by the government be reviewed from a gender perspective and provides specific innovative tools (e.g. a mandatory gender test for all projects with concrete proposals for improvement and a gender budgeting procedure; both conducted by specially trained personnel) for doing so.

The decree therefore involves and targets all members of administration and government in the Wallonia-Brussels Federation. A gender support group composed of two full-time members provides assistance and coordinates the implementation of the measure. An evaluation is planned when the measure has been fully implemented. However, initial results (e.g. the application of the gender test, the provision of training to 100 members of ministerial staff) could already be seen just one year after the decree came into force.

“Gender Equality – Performance Agreement with Universities”, Austria

In Austria, the performance agreements are the main steering instruments in university-level higher education policy. The performance agreement is a contract between a university and the Federal Ministry of Education, Science and Research which defines the university’s budget for a three-year period and sets the targets it has to meet. The rectorate is responsible for the development and implementation of measures to reach these targets. The performance agreement also contains gender equality goals which are based on the main ERA gender equality objectives. Hence, universities commit themselves to the three overall goals: gender balance in all positions and functions, structural change and integration of the gender dimension into research content. The implementation of the performance contract is monitored on an annual basis. The measure itself has also been evaluated.

“Diversitas – Diversity Management Award for Higher Education and Research Institutions”, BMBWF, Austria

The “Diversitas” award highlights achievements in diversity management in higher education and research institutions. The measure is targeted at all public and private universities as well as a number of research institutions. Interested institutions complete a questionnaire describing efforts that have recently led to a major diversity-specific advancement in their institution. The questionnaires are then evaluated by national and international experts using a set of predefined priorities and quality criteria (e.g. multidimensionality, intersectionality, resource orientation, sustainability, innovation and internal/external impact). The results are then announced at a presentation event and published online.

The measure pursues several objectives. It sensitises organisations to a diversity-oriented culture and raises the importance of diversity in their organisational structures. Publishing the results establishes a collection of role models for future diversity management actions. The presentation event serves as a forum for networking and exchange of experiences. First awarded in 2016 by the Federal Ministry of Science, Research and Economy, the “Diversitas” award is now presented every two years and has a total budget of 150,000 euros.

“Research-Oriented Standards on Gender Equality with Toolbox”, Germany

The German Research Foundation’s (DFG) “Research-Oriented Standards on Gender Equality” are aimed at establishing sustainable gender equality policies in the scientific landscape by setting structural and personnel-related standards. Two elements in these policies are the use of the cascade model, which helps to increase the number of women at all academic career levels, and the Toolbox, which presents real-life examples of gender equality measures in German higher education research.

The standards have been adopted by the DFG and are also applicable to applicants for DFG funding. Some of the measures target a larger audience: the Toolbox, for instance, helps equal opportunity experts by providing them with ideas and inspiration for their work.

First adopted in 2008, DFG member organisations regularly submit reports with a changing focus, e.g. on gender equality strategies or the share of female scientists. These reports highlight the positive effects of this measure, such as the new importance of gender equality as a strategic management task and a sign of quality. The evaluation of the standards resulted in new recommendations for further improvements to the measure.

“Laura Bassi Centres of Expertise”, Austria

The Laura Bassi Centres of Expertise programme started in 2009 and finished in 2018. A total of 25.5 million euros in funding was provided for the programme. With funding of 320,000 euros per year/centre, eight research centres should develop and practice a new research culture. Each centre was funded for seven or eight years. They are headed by excellent female scientists and work closely with industry. The focus is on team orientation, targeted personnel development and efficient management culture, fostering more creativity from researchers. The evaluation of the programme showed its success in establishing female role models who manage Centres of Expertise and are committed to developing a management culture that tackles the existing gender bias in science and research (KMU Forschung 2014). The current focus of the Laura Bassi Programme is to support cooperation projects between women working at the interface of science and industry (focus on digitalisation).

5.3.3 Good practice policies and measures to integrate the gender dimension into research content and teaching (ERA gender equality objective 3)

Four good practices address the third ERA gender equality objective (integrating the gender dimension into research content and teaching). The Austrian “FEMtech research projects” measure

funds applied research projects which explicitly address the gender dimension in research content. The German “Networking and Transfer” initiative funds projects with a gender focus which promote dialogue between science and practice above all in the fields of medicine, economics, engineering and natural sciences. The Belgian inter-university “Master in Gender Studies” and the Cypriot “UNESCO Chair” aim at integrating the gender dimension into teaching and research.

“Funding for Networking and Transfer” (Network Activities), Germany

The Funding for Networking and Transfer measure, which runs from 2012 to 2020, has three main objectives: stronger networking among women, expanded research into equal opportunity strategies and increased national and international exchange of the research results. To achieve these objectives, the measure provides funding for a range of different projects.

The funding is targeted at excellent female scientists, gender equality practitioners and representatives of research institutions. The focus of the approved projects lies on topics that have previously been neglected in gender research such as medicine, economics, engineering and the natural sciences.

A total of 42 projects are being funded with a budget of approximately 6.8 million euros. The initial results of these projects are already being highlighted in a large number of events and publications. The increased exchange of these results is evident in the number of international events that have already taken place (e.g. the Gender2020 Conference on Guiding a Change of Culture in Science in Bielefeld).

“FEMtech research projects”, Austria

The FEMtech research projects have a twofold aim: to raise interest among scientists for gender-related applied research and to provide good practice examples of how to integrate the gender dimension into applied research and innovation. This is achieved by funding research projects which specifically address the gender dimension in technology and innovation with a total of 2,400,000 euros per year. Funded projects and the evaluation of the measures are presented online (<http://www.femtech.at/projekte>).

“Inter-university Master’s Degree in Gender Studies”, Wallonia-Brussels Federation, Belgium

The specialised Master in Gender Studies is aimed at creating much-needed gender experts in different academic fields. It also helps to centralise and highlight research on gender that already exists. The programme is implemented by all six French-speaking universities in Belgium, each of which creates a core module and some optional modules specifically for this degree programme.

As a specialised Master’s degree, its target groups are students who already hold a Master’s degree or professionals who have worked in a field related to gender issues for at least five years. Both of these prerequisites ensure that the participants in the programme already have expertise which is then enhanced with gender expertise using a multi- and interdisciplinary approach. This gender expertise is developed by providing the students with a solid theoretical and methodological base before they write a research-based or traineeship-based thesis and by taking specialised modules in fields such as psychology, arts and humanities, social sciences, law, business or architecture.

Launched for the first time in 2017, the programme will be run for the third time in 2019. An evaluation of the programme is planned.

“UNESCO Chair in Gender Equality and Women’s Empowerment”, Cyprus

The long-term goal of the UNESCO Chair in Gender Equality and Women’s Empowerment at the University of Cyprus is to promote a system of research, training, information and documentation activities in gender studies both in Cyprus and in all partner countries. This is achieved through a diverse set of measures, e.g. by supporting gender-specific research aimed at sensitising policy makers and developing good practices; developing and coordinating a gender studies postgraduate programme to train youth and stakeholders for a community of equality; organising national and international conferences for interuniversity exchange.

The chair is provided with an annual budget and the necessary human and material resources, such as a chair holder, two postgraduate students, an administrative team from the Department of Education at the University of Cyprus and several fully-equipped offices.

The quality of the measure is ensured by annual evaluations by the UNESCO central office as well as an evaluation every four years for the renewal of the agreement and chairing.

6 >

Concluding Assessment

To summarise the data collected from different sources and described in the previous chapters, we developed a typology of NAPs and NAP implementation. We differentiate therein between six different groups of countries:

- (1) Countries with a **comprehensive and consistent NAP** and corresponding implementation. This cluster consists of Austria, Belgium, Germany, the Netherlands, Slovenia, Spain and Sweden. The NAPs of these countries contain a context analysis which addresses all three ERA gender equality dimensions (representation of women in science in general; representation of women in decision-making positions as well as structural and cultural barriers which lead to an underrepresentation of women in decision making; and the integration of the gender in research content). The objectives and priorities of the NAP are derived from the context analysis and lead to specific measures which address the problems mentioned. With the exception of Slovenia, all countries in this cluster implement policies or measures for all three ERA gender equality objectives.
- (2) The second group of countries have developed and implemented **focused NAPs**. This cluster consists of Cyprus, Denmark, Finland, Ireland, Luxembourg, Malta and Portugal. Four of these countries address all three gender equality objectives in their context analysis but focus on two of the three dimensions in their NAP priorities and implemented measures. The other three countries focus on two ERA gender equality objectives in the context analysis, and formulate corresponding priorities and implement policies and measures for these two priorities.
- (3) The third cluster comprises countries with **inconsistencies** within the NAP or between the NAP and its implementation. This cluster consists of Greece, Italy and the UK. For instance, the Italian NAP only addresses the ERA structural change objective in its context analysis yet formulates priorities for the first and second ERA objectives. The UK NAP focuses in its context analysis on the first ERA objective but its priorities and implementation address the second objective.
- (4) The common feature in the fourth group of countries is that their NAPs do not contain a context

analysis or only contain a very narrow one. Nevertheless, they do formulate priorities, and some of them have also implemented measures. This combination of a lack of problem analysis and formulation of priorities or implementation of measures generate an **actionistic NAP**. This cluster consists of the Czech Republic, Estonia, Lithuania and Poland.

- (5) Croatia and Latvia form a specific cluster of **focused NAPs without implementation**. Both of their NAPs contain a context analysis and formulate objectives but neither country has so far implemented any measures.
- (6) The last group comprises countries **with no NAP** (Hungary and Slovakia) or **an NAP without gender equality priorities** (Bulgaria and Romania).

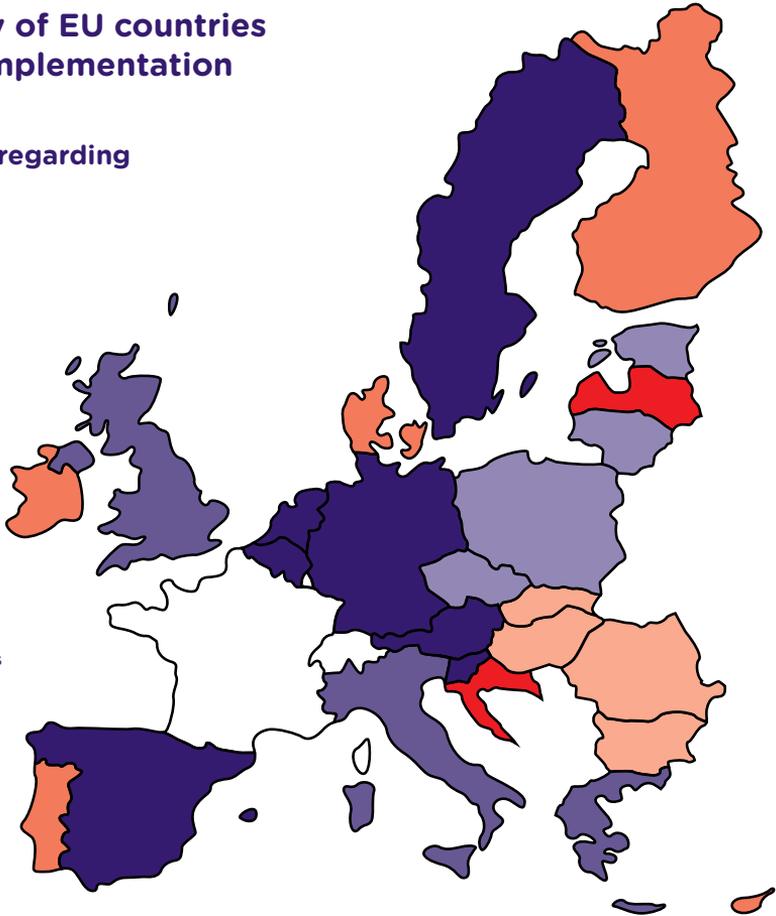
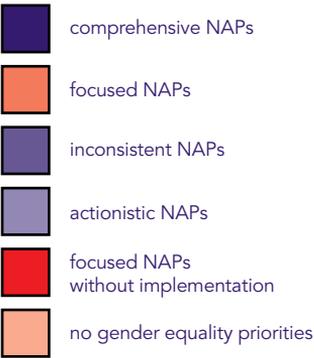
Our first report on NAP Priority 4 implementation (D3.1) revealed significant differences between EU15 and EU13 countries. According to the results of our

survey of SWG GRI members, the NAP was the first policy document on gender equality in R&I for 57% of newer Member States – a fact that only holds for 25% of EU15 countries. Priority 4 is more likely to be linked with other priorities in EU15 countries. Newer Member States refer more frequently to difficulties regarding the development of Priority 4.

As a consequence, it is not surprising that none of the EU15 countries are assigned to Clusters 4 to 6. This gap between EU15 and EU13 countries is not insurmountable as the examples set by Slovenia, Cyprus and Malta show. What matters are the preconditions and the types of support that aided the development of a comprehensive gender equality policy in R&I. It is also evident that good practice policies and measures are primarily found in countries in Clusters 1 and 2. This also illustrates a need for mutual learning between more and less experienced countries regarding gender equality in R&I.

Figure 11: Typology of EU countries by NAP and NAP implementation

Typology of countries regarding NAP implementation





Stakeholders' perspective on NAP

7.1

Assessment of NAP implementation

Interviews with members of the SWG GRI complement the information available from documents, the GENDERACTION survey and its update. The focus of the interviews lay on the assessment of NAP implementation as well as lessons learned for the further development of the ERA roadmap as a steering instrument (see Chapter 10.1 for the guiding questions for the interviews and the list of interviewees). All twelve members of the SWG GRI who in principle agreed to give an interview (update of the survey in 2019) were contacted. Not all interviews could be carried out and, in the end, nine interviews representing seven countries were conducted between May and July 2019. Following a triangulation approach, the interviews represent three different types of NAP and NAP implementation and complement the information available from other data sources (Flick 2018).

Countries with a comprehensive NAP (Austria, Belgium, Spain) share some common characteristics regarding gender equality in R&I.

- They already had experience with gender equality policies in R&I prior to the NAP (2016).
- In all three countries, a person or a unit in the Ministry for Science and Research is responsible for the development and implementation of gender equality policies.
- In addition to the person/unit responsible for gender equality policies in R&I, there is a supporting infrastructure for gender equality in place, e.g. the “Women in Science Committee”⁹ (“Le Comité Femmes et Sciences”) for the French-speaking part of Belgium or the “Observatory for Women, Science and Innova-

tion" (OMCI)¹⁰ in Spain. In Austria, the monitoring system for R&I also contains specific gender monitoring.

- In these countries, the NAPs contain both existing gender equality policies (in place before 2016) and a commitment to further develop these policies (e.g. identified blind spots regarding gender equality). The Spanish NAP, for instance, focuses on measures to support the integration of gender into research content, while the Austrian NAP aims at supporting cultural change in science and research. The interview partners stress that this development focuses on national priorities which are in line with ERA Priority 4. Consolidating existing policies under the same umbrella – the NAP – is seen as a positive approach as it *"facilitates political communication about gender equality policies"* and *"increases the visibility of gender equality policies"*.
- The further development of the existing gender equality policy mix takes different forms: in Austria, the NAP has led to intensified cooperation between the Federal Ministry of Education, Science and Research and the Federal Ministry for Transport, Innovation and Technology. In Spain, new topics such as gender in international cooperation emerged during the implementation of the NAP. In other respects,



- 9 The tasks of the "Women in Science Committee" (constituted in 2016 and hosted by the Academy of Research and Higher Education/ARES) are to elaborate statements and recommendations on gender equality issues in academia and science, to exchange information and good practices, to support the implementation of gender equality measures and to engage in the SWG GRI.
- 10 The goals of the "Observatory for Women, Science and Innovation" (constituted in 2019 and formed by nine government ministries) are to analyse the situation of women in research and innovation, to encourage the implementation of gender equality policies and activities and to promote the improvement of the situation of women in science, technology and innovation in Spain. This includes monitoring policies, reporting, evaluating the impact of policies and making recommendations.

the further development of existing policies and the development of the NAP coincided (e.g. the establishment of the "Women in Science Committee" in Belgium or the "Observatory for Women, Science and Innovation" in Spain). In Austria, the topics of cultural change in science and research or a stronger orientation towards diversity in gender equality policies had already emerged before the NAP was developed.

- This self-commitment is also highlighted by the fact that the NAP is a policy paper which has been formulated by the government and approved by the Council of Ministers (e.g. Austria, Spain).
- In all three countries, relevant stakeholders were involved in the development of the NAP and are also involved in or informed about its implementation. This stakeholder involvement takes different forms. In Belgium (Wallonia-Brussels Federation), for instance, the "Women in Science Committee" plays a crucial role in stakeholder involvement. In Austria, stakeholders are involved in the form of regular events like the European Forum Research.
- In addition to these forms of stakeholder involvement, formal and/or informal exchanges between experts for the different ERA priorities have been established in recent years (e.g. the ERA Roundtable in Austria).
- A special characteristic of gender equality policies in R&I in countries with a consistent NAP is that communication about these policies at the national level constantly refers to the EU/ERA policy. This not only reminds stakeholders of the NAP and the underlying ERA priorities but also ensures that inconsistencies in policy at different levels are avoided.

Malta and Cyprus, two countries with focused NAPs, share some of the characteristics of the countries with comprehensive NAPs. They are both EU13 countries but are also engaged in gender equality in R&I. For instance, both countries have officers responsible for gender equality in R&I in their corresponding ministry. However, the supporting infrastructure is not as well developed as it is in the countries with comprehensive NAPs. They have also attempted to develop their NAPs using a participatory stakeholder approach: Malta,

for instance, organised a workshop for each NAP priority to involve relevant stakeholders. However, the low visibility of the NAP at both national and EU level is evidently a problem. The NAP is known among the participating stakeholders but not beyond that group. The two countries have also made attempts to link national policies and the NAP: Cyprus introduced a new governance system for R&I in 2018 which affected the implementation of the NAP, while Malta has tried to link its national R&I policies with EU strategies, for instance by adapting its national research and innovation programme to bring it into line with Horizon 2020. However, in both countries, the focus lies on national policies and national priorities which are not necessarily identical with ERA priorities.

Those countries which do not have a gender equality priority in their NAP or did not submit a NAP (Poland, Slovakia) also have some characteristics in common. First and foremost, they are characterised by a lack of a discourse about gender equality – both in general and in R&I. At societal level, gender equality is seen as a threat to societal values (family life) and contradictory discourses (e.g. the pro-life movement). With regard to R&I, gender equality is not defined as a three-dimensional construct but is reduced instead to the representation of women in science and in leadership positions. However, awareness of the structural barriers is low, and the main problem recognised is the reconciliation of work and childcare. The Polish NAP (p. 10) formulates this as follows: *“When implementing standards which are going to make the European Union a strong and innovative economy using the latest technological developments, one shall not forget about the need to create such working conditions (for researchers, particularly females but males as well), which will alleviate the conflict between work and private life.”* The third ERA gender equality objective, the integration of the gender dimension into content, does not feature at all as a topic in R&I policy.

Our interview partners did, however, stress that even when there is no political discourse about gender equality in R&I, there is a certain level of awareness of the topic. This is found among researchers who are involved in EU-funded projects and are gender aware (see also Bühner, Wrob-

lewski 2019) and RPOs interested in obtaining the EU’s HRS4R label and therefore have to develop gender equality plans.¹¹ The interview partners stress the importance of addressing and supporting institutions which apply for the HRS4R label precisely because they have to develop such a plan. They assume that if more prestigious RPOs have gender equality plans in place, this might also trigger a bottom-up influence on the gender equality discourse at the national level.



11 The “Human Resources Strategy for Researchers” (HRS4R) supports RPOs and RFOs which implement the “European Charter for Researchers” and the “Code of Conduct for the Recruitment of Researchers” (both adopted by the EC in 2005) in their policies and practices. The implementation of the HRS4R strategy renders such institutions more attractive to researchers looking for a new destination. Since January 2017, a new, more demanding procedure has been in place, in which institutions have to apply to the EC for HRS4R recognition. A key point in this procedure is the need for institutions to make progress towards the principles of open, transparent, merit-based recruitment (OTM-R) which should ensure equal opportunities for all candidates.

7.2

Assessment of the NAP process

All our interview partners concur in underlining the relevance of the autonomy of the Member States in defining their NAP objectives according to their national priorities.

In general, the NAPs confirmed or supported the further development of existing gender equality policies in countries which already had such a policy mix in place. However, they did not provide enough incentive for the more inactive countries to significantly increase their engagement for gender equality in R&I. Those countries with experience in gender equality and those that were in the process of developing their policy mix would have liked to have received feedback on the NAP they submitted. Some form of feedback – especially when developing the NAP – would have been helpful for more experienced countries and valuable support for their less experienced counterparts. In one interview, it was suggested that targeted support for NAP development similar to the Horizon 2020 Policy Support Facility (PSF) should be provided¹². A feedback mechanism would also allow questions to be raised if a country did not submit an NAP or define gender equality priorities.

The interviewees were critical of the low visibility of NAPs at EU and national level. They also felt that more structured guidance for the development of NAPs would be beneficial. They suggested supplying a template or a process description which contains the main elements of NAP development. This guidance should also include the three-dimensional ERA gender quality objective. The interviewees also stressed the importance of common goals for gender equality in R&I and were critical of the lack of comparability of NAPs, which results in the use of different gender equality concepts therein.

A very critical discussion developed regarding the ERA monitoring and EMM indicators. The interviewees agreed that national monitoring is more relevant for the political discussion on gen-

der equality in R&I than the ERA Progress Report or the She Figures. Interviewees from countries with comprehensive NAPs stressed the fact that the development of gender equality policies is usually based on an empirical assessment (baseline analysis) which defines the problem to be addressed. Consequently, monitoring and the further development of the available data sources and indicators are also addressed in their NAPs (e.g. Austria, Spain). National monitoring systems are in line with She Figures but provide additional or more detailed information.

Most interviewees were also critical when it came to the ERA Progress Report. They criticised the reference to the EMM headline indicator “Women in Grade A Positions” in their assessment of the NAP implementation for several reasons. They felt, for instance, that the indicator is not adequate for monitoring NAP implementation. In most cases, the contribution of NAP policies to an increase in the share of women in Grade A positions is indirect and will therefore only be effective in a long-term perspective. They also argued that a high share of women in Grade A positions does not mean that the structural barriers on the path to these positions have been abolished



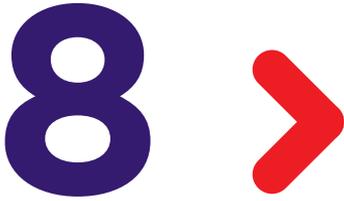
12 The Horizon 2020 Policy Support Facility (PSF) was launched in 2015 and provides EU Member States (MS) and associated countries (AC) with practical support in designing, implementing and evaluating reforms that enhance the quality of their R&I investments, policies and systems. The PSF provides best practice, independent, high-level expertise and guidance at the request of MS and/or AC through a number of services such as peer reviews, mutual learning exercises and specific support. To organise this process, the EC issues an annual Call for Expression of Interest via the European Research Area and Innovation Committee. For further information, see: <https://rio.jrc.ec.europa.eu/en/policy-support-facility>.

and that women and men in Grade A positions are employed on equal terms. They also lamented the fact that none of the indicators focus on structural change. Hence, the share of women in decision making roles is not addressed in the monitoring.

The interview partners also expressed doubts about the validity of the EMM indicator “Gender in Content”, assuming that there is a bias towards English-language journals and the “hard” sciences. The latter is seen in particular as a gendered bias.

A central topic in the interviews with stakeholders from countries with comprehensive or focused NAPs is the self-commitment to implement gender equality policies in R&I which is expressed by the NAP. This commitment would be underlined by specific reporting on NAP implementation. A specific report on the implementation of the NAP would also increase the visibility of the NAPs at the national level and allow the identification of good practice policies and measures. In addition, it would increase transparency among countries and provide a starting point for mutual learning.

National reports on the implementation of NAPs (e.g. in the middle and at the end of the implementation period) would also provide a possibility to describe national developments or changes in the R&I context as well as changing political priorities (e.g. due to a new government). The interviewees were unsure if there would be a possibility to update the NAP in the event of a change in circumstances.



Conclusions

8.1

Summary of the main results

European Research Area (ERA) Priority 4 focuses on gender equality and gender mainstreaming in research and innovation. The objective is to foster scientific excellence and breadth of research approaches by fully utilising gender diversity and equality and avoiding an indefensible waste of talent. Within their national action plans (NAPs), EU Member States and associated countries are asked to develop policies which address gender imbalances particularly at senior levels and in decision making and which strengthen the gender dimension in research. The aim of GENDERACTION Work Package 3 (WP3) is to analyse the implementation of Priority 4 in NAPs, identify good practices and develop recommendations regarding gender equality for the next ERA Roadmap and its monitoring.

Our analysis shows that 26 out of the 28 EU Member States participated in the ERA process by submitting and implementing a National Action Plan. For several countries, the ERA Roadmap was the initial spark that triggered the development of their first-ever gender equality strategy for R&I (e.g. Cyprus, Luxembourg, Malta or Norway). In others, the NAP was used to consolidate and further develop existing policies which support gender equality in R&I. Member States were given considerable scope when it came to developing an NAP within the framework of the ERA Roadmap. This allowed the NAPs to be aligned with actual circumstances in each country (e.g. by addressing specific gender inequalities, building on existing experience with gender equality policies and involving relevant national stakeholders).

The analysis of NAP implementation is based on multiple, complementary data sources (NAP documents, a standardised survey of relevant stakeholders and expert interviews). We used all the information collected to develop a typology of countries with respect to NAPs and NAP implementation. We distinguish therein between six clusters of countries:

- Countries with a **comprehensive and consistent NAP** and corresponding implementation (Austria, Belgium, Germany, the Netherlands, Slovenia, Spain and Sweden). The NAPs of these countries contain a context analysis which addresses all three ERA gender equality dimensions (representation of women in science in general; representation of women in decision-making positions as well as structural and cultural barriers which lead to an underrepresentation of women in decision making; and the integration of the gender dimension in research content). The objectives and priorities of the NAP are derived from the context analysis and lead to specific measures which address all three ERA gender equality objectives.
- Countries with **focused NAPs** (Cyprus, Denmark, Finland, Ireland, Luxembourg, Malta and Portugal). Countries assigned to this group address two or three gender equality objectives in their context analysis but focus on only two of the three dimensions in their NAP priorities and measures implemented.
- Countries with **inconsistencies** within the NAP or between the NAP and its implementation (Greece, Italy and the UK). The UK NAP, for instance, focuses on the first ERA objective in its context analysis but its priorities and implementation address the second objective.
- Countries with **actionistic** NAPs (the Czech Republic, Estonia, Lithuania and Poland). The NAPs for these countries either do not contain a context analysis or only contain a very narrow one. Nevertheless, priorities have been formulated and measures implemented in some countries.
- Countries with **focused NAPs** but **without implementation** (Croatia and Latvia). Both NAPs contain a context analysis and the formulation of objectives but no measures have been implemented so far.
- Countries without a NAP (Hungary and Slovakia) or countries with a NAP but **without gender equality priorities** (Bulgaria and Romania).

It is striking that the **cluster of countries which the GENDERACTION assessment categorises as good practice countries with regard to NAP implementation differs significantly from the countries identified as the leading group in the ERA Progress Report 2018** (EC 2019a). According to this report, Croatia, Lithuania, Latvia and Romania belong to Cluster 1, which contains the best-performing countries in terms of the share of women in Grade A positions. However, our analysis identified Austria, Belgium, Germany, the Netherlands, Slovenia, Spain and Sweden as the countries with comprehensive and consistent NAPs.

This difference in assessment results from different approaches to gender equality and the indicators used to measure the implementation of gender equality policies. While the GENDERACTION assessment focuses on the implementation process of gender equality policies based on multiple data sources and indicators, the ERA progress report focuses on the development of the headline indicator and two supporting indicators. This approach is too limited to provide meaningful information for the assessment of progress towards gender equality in R&I.

The focus of monitoring on one main dimension – the share of women in Grade A positions – is problematic not only for the assessment of NAP implementation but also for the discourse on gender equality as it allows gender equality be reduced to female representation. ERA progress report country snapshots do not include a discussion of the development regarding gender equality that refers to the three-dimensional construct defined in the ERA Roadmap (ERAC 2015). A broader discussion of the developments regarding gender equality in R&I among stakeholders at national and EU level would also support a gender equality discourse within the ERA. Such a discourse would support both the development of a common understanding of gender equality and mutual learning activities (e.g. by sharing information about good practice policies).

Our analysis reveals that the process initiated by the ERA Roadmap 2015-2020 has only had limited success in increasing the engagement of countries which have hitherto been fairly inactive regarding gender equality in R&I. While some countries (Cyprus, Luxembourg, Malta, Norway)

developed a gender equality policy for R&I for the first time, others either did not submit a NAP (Hungary, Slovakia) or did not address gender equality issues in their NAP (Bulgaria, Estonia, Lithuania, Poland). This also illustrates the need for a gender equality discourse within the ERA aimed at establishing a shared understanding of gender equality and common gender equality goals.

Furthermore, our analysis shows no positive correlation between the share of women in Grade A and the innovation and excellence indicators. But the higher a country scores on the Gender Equality Index, the higher its innovation potential. Similarly, the correlation between the share of RPOs with GEPs and the innovation indicators are significant and positive. This means that an increasing share of RPOs with GEPs is positively correlated with a country's innovation potential.

8.2 Recommendations

Experiences with NAP implementation and the results achieved so far show the potential of this instrument to initiate the development of gender equality policies for the first time or, in the case of more experienced countries, to further develop and consolidate existing policies. However, it is also evident that the process linked to the ERA Roadmap development, implementation and monitoring does not provide incentives to increase engagement for gender equality in R&I in fairly inactive countries. Consequently, the gap between experienced and inactive countries is widening.

Since the ERA Roadmap is a European steering instrument that should contribute to a more coherent R&I policy, including gender equality, the recommendations formulated primarily address EU stakeholders (European Commission, Council of the EU). These recommendations are based on the assumption that the next ERA Roadmap will aim at

- strengthening national commitment regarding R&I based on a three-dimensional concept of gender equality,
- bridging the gap between active and inactive countries, and
- contributing to the further development of gender equality policies.

The recommendations address three topical areas:

- NAP development
- Monitoring of NAP implementation
- Development of a policy discourse.

8.2.1 NAP development

Experiences with the NAPs 2015-2020 demonstrate a need for **adapting the procedure to develop and submit NAPs**. The NAPs are structured differently. For instance, not all NAPs contain a baseline assessment of gender equality in R&I (context analysis) or concrete objectives, targets and measures. In our interviews, stakehold-

ers called for more concrete guidance regarding the development of NAPs. At the same time, they stressed the importance of giving Member States the autonomy to decide on the focus of their own policies. Hence, **more detailed guidance** for NAP development which addresses the main procedural steps or elements would seem to be required. More specifically, NAPs should:

- include an assessment of the status quo of gender equality in R&I (context analysis) which covers all three gender equality dimensions,
 - contain concrete targets or priorities derived from the context analysis,
 - define responsibility, timeframes and budgets for concrete measures, and
 - indicate how the implementation of the NAP and the concrete policies will be monitored.
- Furthermore, it should be recommended that
- main stakeholders are involved in the NAP development process, and
 - gender equality is also addressed in the other priorities (gender mainstreaming).

The involvement of relevant stakeholders at the national level could also support building a gender equality discourse at the national level in the rather inactive countries. This would also support bottom-up initiatives from institutions or researchers interested in gender equality (e.g. researchers involved in EU-funded projects or institutions applying for the HRS4R label).

In our interviews, the stakeholders mentioned that feedback on a draft version of the NAP would have been helpful both for the development of the NAP itself but also for the discussion of NAP priorities with national stakeholders. They also suggested supporting NAP development by providing specific support for policy development similar to the Horizon 2020 Policy Support Facility (PSF)¹³. Such support would also contribute to the development of a shared understanding of gender equality and stimulate a catch-up process in the rather inactive countries.

8.2.2 Monitoring of NAP implementation

Our analysis of the implementation of the NAPs produces results which are not in line with the ERA progress report, thus suggesting that the

latter is not a meaningful instrument for measuring NAP implementation. The current monitoring of ERA progress focuses not only on a restricted set of indicators but also on the aggregate level, which does not consider the structural change dimension and the implementation level. Hence, the dominance of the headline indicator (share of women in Grade A positions) brings with it the risk that gender equality will be reduced to one single dimension. This approach allows countries with a high representation of women in Grade A positions to neglect any need for gender equality policies even if women are underrepresented in decision making and no actions are taken regarding the other two objectives.

A meaningful set of indicators for monitoring the NAP implementation therefore has to be developed. The monitoring of NAP implementation (and not just progress in headline indicators) is necessary to strengthen the NAPs as a European steering instrument (both on a general level and for gender equality in particular).

GENDERACTION suggests a combined approach using (available) quantitative indicators and qualitative/survey data provided by Member States. This combined approach includes reporting by Member States, which would provide several advantages:

- A compulsory report on NAP implementation by Member States will increase their commitment to the NAPs and will make it more difficult to justify why no action has been taken.
- A report will allow Member States to present national developments, success stories and barriers regarding gender equality in R&I. Furthermore, it would provide them with a possibility to discuss relevant changes in their national contexts (e.g. new priorities after a change in government).
- Experiences with concrete policies – especially good practice policies – could be used for mutual learning activities.
- A report would give the NAP more visibility at EU level and could be used for national dissemination activities regarding gender equality in R&I.



13 <https://rio.jrc.ec.europa.eu/en/policy-support-facility>

8.2.3 Development of a policy discourse

The varying goals and focus of the gender equality policies presented in the NAPs indicate a lack of a gender equality discourse. This leads to the situation that not all Member States refer to the three ERA gender equality objectives in their NAPs. The current NAP submission process also does not include feedback from experts or the EC on the NAP which could contribute to establishing a more consistent understanding of gender equality and its benefits (e.g. its contribution to innovation).

A discourse on gender equality should be initiated by the EC and involve ERA structures – especially the SWG GRI – as well as other relevant European and national stakeholders. It will be crucial to encourage national ministries for science and research to actively participate in this discourse. Members of the SWG GRI should act as mediators between the European and the national levels by promoting the topic, involving relevant stakeholders and engaging with other ERA priorities. This would require that SWG GRI delegates hold positions which allow them to pursue the implementation of gender equality policies at national level.

An adapted monitoring of NAP implementation could be used as a starting point for a gender equality discourse, for instance when the assessment of developments (e.g. regarding the share of women in Grade A positions) as well as the implementation of policies refer to the three main gender equality objectives. This would include the recognition of blind spots as well as troublesome developments (e.g. when policies strengthen gender stereotypes). A comprehensive and meaningful monitoring system could likewise be used to identify good practice policies.

Good practice policies represent a starting point for mutual learning activities which should be organised in a way that allows both more and less experienced countries to profit from the exchange. More experienced countries could use such mutual learning activities to reflect on and further develop their policies, while their less experienced counterparts would receive support in developing NAPs that are targeted to their particular circumstances. Mutual learning activities could take different forms such as bilateral or multilateral exchange focused on one specific topic or broad-

er conference settings.¹⁴ However, such a mutual learning approach also requires common gender equality goals.

Another important aspect of a gender equality discourse is to stress the positive relationship between gender equality on the one hand and innovation and excellence on the other hand. To stress the link between comprehensive gender equality policies (like GEPs which address all three gender equality dimension) could serve as a leverage to engage more stakeholders in R&I in a gender equality discourse. This approach would also support mainstreaming gender into the other ERA priorities. The upcoming discussion of major societal challenges provides numerous opportunities to address innovation and its application from a gender perspective – e.g. in the context of climate change, artificial intelligence, robotics.



14 The results of this report will feed into the planning of WP4 activities for 2020.



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Luxembourg

Le Gouvernement du Grand-Duché de Luxembourg. Ministère de l'Enseignement supérieur et de la Recherche (2016): *Luxembourg National ERA Roadmap 2020*. Retrieved from https://era.gv.at/object/document/2763/attach/LU_national_ERA_Roadmap_Summary.pdf.

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Malta

The Malta Council for Science & Technology and Ministry for Education and Employment (2016): *National*

European Research Area Roadmap. Malta 2016-2020. Floriana. Retrieved from https://era.gv.at/object/document/2763/attach/MT_National_ERA_Roadmap_2020.pdf.

European Commission (2019): *European Research Area Progress Report 2018. Country Profile Malta*. Brussels. Retrieved from https://ec.europa.eu/info/sites/info/files/research_and_innovation/era/era-2018_country_profile_mt.pdf.

Montenegro

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The Netherlands

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Norway

Norwegian Ministry of Education and Research (2016): *National ERA Roadmap, 2016-2020*. Oslo. Retrieved from https://era.gv.at/object/document/2763/attach/NO_ERA_National_Action_Plans__2016_-_2020_.pdf.

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Poland

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Portugal

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Romania

Ministerul Educației Naționale și Cercetării Științifice (2016): *Romanian ERA Roadmap*. Bucharest. Retrieved from https://era.gv.at/object/document/2763/attach/Romanian_ERA_Roadmap.pdf.

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Serbia

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Slovenia

Republika Slovenija, Ministrstvo za izobraževanje, znanost in šport (2016): *Slovenian ERA Roadmap. Slovenian Strategy for Strengthening the European Research Area 2016-2020*. Ljubljana. Retrieved from https://era.gv.at/object/document/2763/attach/SI_ERA_Roadmap.pdf.

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Slovakia

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Spain

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Sweden

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Switzerland

Swiss Confederation; Federal Department of Economic Affairs, Education and Research (EAER); State Secretariat for Education, Research and Innovation (SERI) International Cooperation in Research and Innovation (2016): *Swiss National ERA Roadmap*. Bern. Retrieved from https://era.gv.at/object/document/2763/attach/CH_National_ERA_Roadmap_V_1_0_Final.pdf.

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Turkey

European Commission (2019): *European Research Area Progress Report 2018. Country Profile Turkey*. Brussels. Retrieved from https://ec.europa.eu/info/sites/info/files/research_and_innovation/era/era-2018_country_profile_tr.pdf.

The United Kingdom

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10 >

Annex

10.1

Expert interviews

The expert interviews were conducted face to face if possible (e.g. with participants in the GENDERACTION General Assembly in Cyprus in May 2019) or via telephone or Skype. They followed a set of guiding questions which the respondents received in advance. The set of questions was used in a flexible manner in line with the specific national contexts. Both the respondent and the interviewer signed an informed consent sheet before the interview began. Storage of recorded data, transcripts as well as informed consent sheets follows the requirement of D1 H Requirement No 1. Interviews with the national representatives are expert interviews that do not intend to collect personal data and information.

10.1.1 Guiding Questions for Countries with a NAP

NAP priorities regarding gender equality

- How would you describe Priority 4 of the NAP?

Is it a summary of existing policies? Is the NAP something in addition? Is it integrated into the general gender equality (GE) policy?

- Have GE policy priorities changed since 2016? (further development, concretisation, change in priorities)?
- How would you describe the relevance of the NAP for GE policies in R&I? Does the NAP boost GE policies? Did the adoption of the NAP provide a window of opportunity for advancing GE policy in R&I?
- How well do you think the relevant stakeholders are informed about NAP Priority 4?

NAP implementation

- Did the implementation of concrete policies take place as planned?
- What are the important aspects in the implementation of the NAP? Which new/innovative measures have been introduced? Have new

structures for GE policy been implemented? Have new priorities been introduced in GE policy in R&I?

- Has the NAP implementation changed over time? How?
- Are specific budgets allocated to NAP implementation?
- Did the development of the NAP or the implementation of specific measures initiate a change in structures for GE policies? (e.g. cooperation between different stakeholders, establishment of new structures for GE)?

NAP monitoring – ERA progress report

- How relevant is NAP monitoring / the ERA progress report at a national level?
- Are the results taken up/discussed at the national level? If so, what are the outcomes of these discussions? (e.g. further refinement of the NAP actions, involvement of new stakeholders)
- Do you think the three indicators used for the ERA progress reports are appropriate for measuring progress in GE in R&I in your country? Do they allow you to further the agenda?

Further development of the NAP process

- If NAP monitoring is not used as a steering instrument/not taken seriously: What would be needed to use NAP/ERA monitoring as a steering instrument for GE policies?
- What would be needed to improve the process?
- What would be needed for the NAP to support GE at national level?
- Was the NAP helpful for the further development of national policies? If so, in what way?

10.1.2 Guiding Questions for countries without a NAP

National ERA roadmap (NAP)

- Reasons why no NAP has been formulated?
- Which other specific national policies or strategies for GE in R&I are in place?

Priorities of GE policies in R&I

- How would you describe the priorities of GE policies in R&I?
- What are the main measures?

- Have the priorities of the GE policies changed since 2016? (further development, concretisation, change of priorities, reduced importance of the topic)? Why is this the case?
- How would you describe the relevance of the ERA Roadmap (EU priorities) for national GE policies?

Implementation of GE policies

- Which concrete GE policies/measures/programmes in R&I have been implemented since 2016?
- Did the implementation of GE policies in R&I change over time? If so, how?
- Are specific budgets allocated for the implementation of GE policies in R&I?

EU monitoring – ERA progress report

- How relevant is NAP monitoring / the ERA progress report at the national level?
- Are the results taken up/discussed at the national level? If so, what are the outcomes of these discussions (further refinement of the NAP actions, involvement of new stakeholders)?
- Do you think the three indicators used for the ERA progress reports are appropriate for measuring progress in GE in R&I in your country? Do they allow you to further the agenda?

Further development of NAP process

- If NAP monitoring is not used as a steering instrument/not taken seriously: What would be needed to use NAP/ERA monitoring as a steering instrument for GE policies?
- What would be needed to improve the process?
- What would be needed for the NAPs to support GE at national level?
- Was the NAP helpful for the further development of national policies? If so, in what way?

10.1.3 List of countries and experts participating in the expert interviews

Austria

Roberta Schaller-Steidl, Federal Ministry of Education, Science and Research
Silvia Neumann, Federal Ministry for Transport, Innovation and Technology

Belgium

Martin Degand, Direction de la Recherche Scientifique du Ministère de la Fédération Wallonie-Bruxelles

Cyprus

Anna Stavrinou, Directorate for Research, Innovation and Lifelong Learning, Secretariat of the National Board for Research and Innovation, Directorate General for European Programmes, Coordination and Development

Malta

Jennifer Casingena Harper, Malta Council for Science and Technology (MCST)
Jacqueline Grech, Malta Council for Science and Technology (MCST)

Poland

Anna Knapinska, National Information Processing Institute

Spain

Ana Puy, Ministry of Science, Innovation & Universities

Slovakia

Alexandra Bitusikova, Matej Bel University

10.2

ERA Monitoring indicators

Table 6: ERA Monitoring indicators (ERA Progress Report 2018)

	Country	Women in Grade A positions	Cluster	PhD graduates	Cluster	Gender in research content	Cluster	
MS	Austria	23%	3	42%	4	1.02	3	
	Belgium	18%	3	47%	3	0.95	3	
	Bulgaria	37%	2	53%	2	1.07	2	
	Croatia	41%	1	55%	2	1.24	2	
	Cyprus	13%	4	60%	1	0.88	3	
	Czech Republic	15%	4	43%	4	0.91	3	
	Denmark	21%	3	48%	3	1.10	2	
	Estonia	24%	3	54%	2	1.27	2	
	Finland	29%	2	52%	2	1.16	2	
	France	22%	3	45%	3	0.73	3	
	Germany	19%	3	45%	3	0.89	3	
	Greece	22%	3	49%	3	0.92	3	
	Hungary	20%	3	47%	3	1.51	2	
	Ireland	21%	3	48%	3	0.62	3	
	Italy	22%	3	52%	2	1.04	3	
	Latvia	41%	1	58%	1	0.98	3	
	Lithuania	39%	1	58%	1	1.26	2	
	Luxembourg	17%	3	40%	4	1.10	2	
	Malta	21%	3	41%	4	1.08	2	
	Netherlands	19%	3	49%	3	1.05	3	
	Poland	24%	3	54%	2	1.01	3	
	Portugal	26%	3	55%	2	1.50	2	
	Romania	54%	1	55%	2	2.72	1	
	Slovakia	25%	3	52%	2	1.65	1	
	Slovenia	29%	2	61%	1	2.21	1	
	Spain	21%	3	51%	3	1.08	2	
	Sweden	25%	3	45%	3	1.25	2	
	United Kingdom	26%	3	46%	3	1.03	3	
	AC	Bosnia and Herzegovina			45%	3	1.91	1
		Iceland	26%	3	64%	1	1.45	2
		Israel	14%	4	50%	3	1.10	2
		Norway	28%	2	50%	3	1.17	2
Switzerland		23%	3	44%	4	1.04	3	
Total								

Source: ERA Progress Report 2018, Tables 12, 13 and 14

10.3

Number of policies or measures implemented in the context of the NAP

Table 7: Overview of surveys sent out and survey responses

	Country	Participation in survey 2017	No. of factsheets in survey 2017	No. of factsheets after survey update	No. of good practices	
MS	Austria	Yes	17	20	5	
	Belgium	Yes	6	6	3	
	Bulgaria	No	0	0		
	Croatia	No	0	0		
	Cyprus	Yes	2	2	1	
	Czech Republic	Yes	4	4		
	Denmark	Yes	0	0		
	Estonia	No	0	3*		
	Finland	Yes	0	2*		
	France	Yes	2	2		
	Germany	Yes	13	16	5	
	Greece	Yes	0	4**		
	Hungary	No	0	0		
	Ireland	No	0	6*		
	Italy	Yes	0	0		
	Latvia	No	0	0		
	Lithuania	Yes	1	1		
	Luxembourg	Yes	2	2		
	Malta	Yes	0	0		
	Netherlands	Yes	1	1	1	
	Poland	Yes	0	0		
	Portugal	Yes	0	4		
	Romania	Yes	0	0		
	Slovakia	Yes	0	0		
	Slovenia	Yes	0	0		
	Spain	Yes	3	3		
	Sweden	Yes	0	0		
	United Kingdom	Yes	0	4*		
	AC	Bosnia and Herzegovina	Yes	0	0	
		Iceland	Yes	0	0	
Israel		Yes	10	10		
Norway		Yes	0	2*		
Switzerland		Yes	4	4		
Total			28	65	96	

** Including two measures without a reference to gender equality.

10.4

Description of good practices

Table 8: Diversitas – BMBWF Diversity Management Award for Higher Education and Research Institutions, Austria

Description of the measure	The Diversity Management Award is a measure for the promotion and implementation of DM at higher education and research institutions. The prize is awarded to higher education and research institutions in Austria for outstanding and innovative achievements in the field of diversity management. Prizes will be awarded for efforts that have recently led to a major diversity-specific stimulation or will initiate such in the near future in their own institution. The Diversity Management prize is awarded on a two-year cycle and was presented for the first time in 2016.
Objective	The Diversity Management Award is designed to encourage sensitization to and the raising of social awareness for a diversity-oriented and anti-discriminatory culture in the organizational structures of Austria's higher education and research institutions. Measures that have been specifically developed and already set for implementing diversity management thus gain more attention. The Diversity Management Award gives participating institutions the opportunity to appreciate persons or departments that implement diversity measures.
Target group	The invitation to participate is addressed to public and private universities, universities of applied sciences, the Institute of Science and Technology Austria, the Austrian Academy of Sciences (Österreichische Akademie der Wissenschaften) and the Ludwig Boltzmann-Gesellschaft. This measure addresses 55 Austrian universities (22 public universities, 12 private universities and 21 universities of applied sciences) and 3 research institutions.
Approach	The selection of praiseworthy higher education and research institutions is carried out by a top-class panel of national and international experts. The panel reviews and evaluates the submissions on the basis of the award criteria, prize guidelines and application form (questionnaire). The evaluation is based on a set of defined priorities (such as structural consolidation, multidimensionality and intersectionality, contextual connection) and quality criteria (such as inclusion, resource orientation, participation and networking, sustainability, innovation, creativity, internal and external impact, transfer of measures).
Results	The award is a measure for the "Promotion of cultural change within the scientific and research institutions". It makes a publicly effective contribution to the "ERA - Gender Equality Objectives" (cultural and institutional change) and to the output-orientated objectives of BMBWF - WF (1 and 4). Going public with the submitted measures creates a role model effect and is an incentive for other higher education and research institutes to implement diversity management, thus contributing to sensitization and self-reflection in the field of diversity.
Resources	By presenting the Diversity Management Award, the Federal Ministry gains insight into the status of implementation of diversity management at higher education and research institutes. The existing objectives and projects in the performance agreements with the public universities and two research institutions can thus be accelerated with the Federal Ministry. As a benefit from the Federal Ministry for the implementation of diversity management, the award creates the basis for networking activities between the institutions and, as a consequence, strengthens competence development and exchange of experience at higher education and research institutions in relation to cultural change.
Evaluation	The prize money amounts to a total of € 150,000 in the form of cash and non-cash prizes for every two years.
Good practice	No
Further information	The measure is defined as good practice by respondent because it makes a publicly effective contribution to the "ERA - Gender Equality Objectives" (cultural and institutional change). https://bmbwf.gv.at/wissenschaft-hochschulen/gleichstellung-und-diversitaet/programme-und-initiativen/diversitas/ (in German)

Source: WP 3 survey

Table 9: Gender Equality Goal within Output-oriented Budgeting, Austria

Description of the measure	<p>According to § 2(1) of the Austrian Federal Budgeting Act, outcome orientation and in particular consideration of the objective of achieving effective equality between women and men has been an integral part of budgetary management in Austria since 2013. All managing bodies in public financial management have to take it into account. The principle of the outcome orientation has to be respected in the medium term and annual budgeting, in performance management and in the (regulatory) impact assessment for planned laws.</p> <p>The gender-related outcome objective within outcome orientation is a multi-year departmental goal, whose main target is to increase the share of women among scientific/artistic university personnel as well as in top university bodies (Rectorate, Senate and University Council).</p> <p>Its main focus is on public universities as they have particularly well-defined personnel structures and appropriate indicators are therefore available.</p>
Objective	The BMBWF's gender-related outcome objective focuses on increasing the share of women among scientific/artistic university personnel as well as in top university bodies (Rectorate, Senate and University Council) since the public universities have particularly well-defined personnel structures and appropriate indicators are therefore available.
Target group	Federal Ministry of Education, Science and Research, public and private universities, universities of applied sciences, research institutions (e.g. Austrian Academy of Sciences, Institute of Science and Technology Austria).
Approach	<p>The outcome objectives describe an aspired, future state in the competency field of a department. It shows the desired societal results of the policy that should be reached in the future. They form a starting point for the annual work programme in ministries and departments. Since 2014, the actual results achieved are reported to the National Council every year.</p> <p>The aim of the outcome objectives is to provide citizens with a better picture of the use of their tax contributions. In future, citizens can also demand observance of those targets by ministers. A Federal Performance Management Office in the Federal Chancellery coordinates and supports the ministries during the performance management cycle. The development of key outcome objectives to which public universities are required to contribute within their performance agreements with the BMBWF are subject to constant monitoring and are regularly discussed in the performance agreement trace talks.</p> <p>Through a continuous increase in the share of women in sustainable careers (tenure track), a medium-term increase in the share of women in professorships is ensured. As a consequence, high-qualified scientific/ artistic young women are already being employed to a higher proportion.</p>
Results	<p>The gender-related outcome objective in the outcome orientation framework has put the field of gender equality on the science and research policy agenda. Gender equality is thus incorporated into the work of the BMBWF and is also anchored in all its relevant strategy and controlling instruments. Austria has caught up in the comparison to other European countries over the past few years. For example, the glass ceiling on university research staff was lowered significantly from 2010 to 2013: while the average glass ceiling in the EU28 countries was barely reduced in this period (from 1.8 to 1.75), it sank in Austria from 2.04 to 1.76. A glass ceiling index of "1" signalises equal opportunities for women as well as for men to achieve grade A-level leadership positions. The higher the figure rises beyond 1, the "thicker" the glass ceiling and the more unlikely it is for women to enter these leadership positions.</p> <p>In terms of women in leadership positions in (basic) research, Austria has now drawn closer to the EU28 average of 20.9% and currently stands at 20.3% (2013).</p> <p>In the representation of women in decision-making committees in research (research and development committees, board members, committees, assemblies and councils), Austria is above the European average: the share of women among members of such decision-making committees lies at 38% (27% in EU28).</p>
Resources	Unknown
Evaluation	<p>Yes, a report is available for download (in German)</p> <p>https://www.oeffentlicherdienst.gv.at/wirkungsorientierte_verwaltung/dokumente/Bericht_zur_Wirkungsorientierung_2015.pdf?5te1dr</p>
Good practice	The measure is defined as good practice by the respondent because the instrument is expected to improve the impact of gender equality measures.

Source: WP 3 survey

Table 10: Gender Equality – Performance Agreement 2016-2018 | 2019-2021, Austria

Description of the measure	<p>The performance agreement is the main steering instrument for essential medium- and longer-term policy objectives pursued together with the universities. Equality is included in the ministry's objectives as a task for the universities. In this context, the universities develop specific goals and measures which are to be implemented within three years. The current performance agreements refer to the period 2016-2018.</p> <p>The ministerial requirements for the 2019-2021 performance agreements are based on the gender equality goal for the ERA processes: women's representation, equality-oriented structures and processes as well as the anchoring of the gender dimension in research content and teaching. In the new period, emphasis is placed on measures in the area of equality-oriented structures / processes to achieve cultural change, e.g. gender-balanced selection procedures, compatibility measures or community building to broaden gender competency in higher education institutions.</p>
Objective	<p>Objectives for the period 2016-2018:</p> <ul style="list-style-type: none"> • Increasing the representation of the underrepresented sex • Anchoring the gender dimension in structures / processes • Anchoring the gender dimension in research content and teaching <p>Objectives for the period 2019-2021:</p> <ul style="list-style-type: none"> • Integration of the gender perspective in structures, processes and policies to remove barriers for women in science and research (cultural/structural change) <ul style="list-style-type: none"> – Anchoring gender equality as a quality criterion for further development of universities – Building gender analysis and gender competency among university members in order to meet the university's goals and fulfil its tasks – Application of gender mainstreaming to the gender pay gap – Supporting the compatibility of studying / working with care obligations for children and dependent relatives • Integration of gender research into research content and research-based teaching <ul style="list-style-type: none"> – Promoting the establishment of gender in research and scientific disciplines in the interdisciplinary access sense – Visibility of research in this field – Anchoring gender research in curricula • Gender balance in all positions and functions <ul style="list-style-type: none"> – Reduction in vertical (leadership positions, junior scientists and collegial bodies) and horizontal segregation (e.g. of women in MINT subjects and the integration of men into female-dominated areas)
Target group	Head and members of the rectorate at public universities
Approach	<p>2016-2018:</p> <p>The majority of the universities' goals are aimed at increasing the representation of women in scientific / artistic leadership positions (professorships and careers). Some universities also address targets concerning the reduction of horizontal segregation in study fields.</p> <p>Gender-oriented structures and processes become predominant through compatibility measures (combining studies with care obligations for children and relatives) and the development of gender competency and gender expertise among university members.</p> <p>The application of gender mainstreaming (to budgetary) processes is also mentioned.</p> <p>The inclusion of the gender dimension in research content and teaching is rarely addressed.</p> <p>2019-2021:</p> <p>The Federal Ministry's equality objective is similar to the ERA equality goal and includes requirements for universities.</p> <p>In this context, universities are invited to develop and set specific goals and to develop implementation measures to reach these goals.</p>
Results	<p>The implementation of measures and their impact is reported annually in the capital report and is discussed in regular meetings between representatives of the Federal Ministry and the university.</p> <p>Final implementation results will be available in the first semester of 2019.</p>
Resources	Part of the global budget within the performance agreement.
Evaluation	<p>Yes, a report is available for download (in German)</p> <p>https://www.wissenschaftsrat.ac.at/downloads/Empfehlungen_Stellungnahmen/2018_2016/Endversion_Leistungsvereinbarungen-2016_2018.pdf</p>
Good practice	The measure is not defined as good practice by the respondent.

Source: WP 3 survey

Table 11: w-fORTE and Laura Bassi Centres of Expertise, Austria

Description of the measure	w-fORTE stands for “economic impulses by women in research and technology” and includes the Laura Bassi Centres of Expertise, where excellent female researchers work at the interface between science and technology. Purpose: to nurture equality of opportunity in research and career development.
Objective	w-fORTE contributes to establishing equal opportunities in scientific and technological worlds of work.
Target group	Female researchers in STEM and women working in the field of technology, both at the interface between science and economy.
Approach	w-fORTE <ul style="list-style-type: none"> • Promotes women in scientific research and technology • Encourages discussions on competent and diversity-aware management • Events for researchers, experts and executives focusing on career development, management skills and team competences • Impetus programme Laura Bassi Centres of Expertise (2009-2018): research centres for applied basic research headed by excellent female scientists; they are close to industry and practice a new research culture, with a focus on team orientation, targeted personnel development and an efficient management culture.
Results	The first Laura Bassi Centres finished their work very successfully in 2016 and 2017. More than 2,200 participants profited from taking part in w-fORTE career workshops.
Resources	Laura Bassi Centres: € 320,000/year/centre
Evaluation	Yes, the report is available for download (in German): http://www.w-forte.at/fileadmin/Redaktion/Daten/Downloadbereich/Endbericht_Zwischenevaluierung_LBC.pdf
Good practice	The measure is defined as good practice by the respondent because of the new research culture established at the Laura Bassi Centres (see above) and the future potential analysis as a criterion in the selection process of funded projects. It is defined as good practice by the respondent.
Further information	http://www.w-forte.at and http://www.w-forte.at/at/laura-bassi-centres/laura-bassi-centres.html

Source: WP 3 survey

Table 12: FEMtech research projects, Austria

Description of the measure	FEMtech research projects initiate and support projects in research, technology and innovation which integrate gender content into the projects.
Objective	FEMtech research projects aim at integrating the gender dimension in research content. By considering the relevance of gender within the project, innovations are supported and new market potential is generated.
Target group	Applicants for the call for FEMtech research projects
Approach	It is expected that successful projects will lead to increasing interest among scientists in the ‘gender’ issue when developing and carrying out research projects to improve the quality and capability of solutions, products and technologies.
Results	Presentation of subsidized projects from 2008 to 2014: http://www.femtech.at/projekte
Resources	€ 2,400,000 for grants per year (2008-2014)
Evaluation	Yes, a report is available for download (in German). http://www.femtech.at/sites/default/files/FEMtech_Bericht_final_v2.pdf An English summary of the evaluation is available: https://gender-summit.com/attachments/article/1346/Wroblewski_paper_GS9Eu.pdf
Good practice	The measure is defined as good practice by the respondent because the evaluation has shown that there is no comparable programme at European level.

Source: WP 3 survey

Table 13: Girls Day, Boys Day, Wallonia-Brussels Federation, Belgium

Description of the measure	<p>Since 2012, the “Girls Day, Boys Day” invites girls and boys to discover the world of work by showing them professions with ‘female’ connotations but which are practised by men and professions with ‘male’ connotations which are practised by women.</p> <p>The project also aims to sensitize them to gender stereotypes and encourage them to make their educational and vocational choices according to their personal interests and skills.</p> <p>In light of this, the equal opportunity and compulsory education services in the Wallonia-Brussels Federation are working together on the best-possible dissemination of the project.</p>
Objective	<p>The “Girls Day, Boys Day” project aims to fight against gender stereotypes in educational and vocational guidance and therefore counter the under-representation of women in certain fields (technical, scientific, etc.). Indeed, promoting science and gender equality should begin in compulsory level education.</p>
Target group	<p>“Girls Day, Boys Day” is aimed at first- and/or second-level pupils when they are confronted with career choices.</p> <p>Indirectly, the project also targets the teachers who attend the presentations on the stereotypes and are thus also sensitized.</p>
Approach	<p>“Girls Day, Boys Day” takes place in two stages:</p> <ul style="list-style-type: none"> • Classroom presentation during the second semester to deconstruct stereotypes. • Meetings with professionals to discover atypical professions for girls and boys.
Results	<p>In 2016, the project covered 59 schools and 212 classes in the 5 French-speaking provinces and the Brussels region. The project involved 4,046 students, 226 teachers and 122 ‘witnesses’ working in ‘atypical’ professions for men or women.</p>
Resources	<p>The project is organized in five provinces in Belgium’s French-speaking community and in the Brussels region.</p> <p>The implementation budget is € 9.500 per province and € 12.000 for Brussels (more students); in total an annual amount of € 59.500 is provided by the FWB to cover the costs of organizing the project (no consideration of salaries in this budget).</p>
Evaluation	<p>Since 2013, the project has been subject to a quantitative and qualitative annual assessment. These evaluations are available on the project website: www.gdbd.be (Evaluation section)</p>
Good practice	<p>The measure is defined as good practice by the respondent because its approach allows it to reach a large number of students at a low cost (volunteer witnesses) and the link between the presentations and the witness meetings allow young people to internalize the concepts of gender stereotypes.</p>
Further information	<p>http://www.gdbd.be/</p>

Source: WP 3 survey

Table 14: Inter-university Master’s in Gender studies, Wallonia-Brussels Federation, Belgium

Description of the measure	<p>The ‘Master de spécialisation en études de genre’ (Specialised Master’s in Gender Studies) is a 60-ECTS (one-year) inter-university Master’s degree grouping all six French-speaking universities in Belgium (Free University of Brussels, University of Liège, Catholic University of Louvain, Catholic University of Mons, University of Namur, Saint-Louis University Brussels).</p> <p>This is the first French-speaking postgraduate degree in gender studies in the Wallonia-Brussels Federation of Belgium (WBF, i.e. the French-speaking part of Belgium). It is also the first postgraduate degree to group all six universities in the WBF and is both multidisciplinary and interdisciplinary.</p>
Objective	<p>This Master’s degree has been the perfect opportunity to gather courses that had previously been scattered and isolated. It also paves the way to offering and creating new specific modules on gender thanks to the expertise of the many researchers and the blooming research centres that already exist in the field. Finally, this Master’s degree offers a practical answer to the growing demand for experts on gender (and sexuality) issues and equality in the private and public sectors.</p>
Target group	<p>Students who already hold a postgraduate degree (Master’s degree) and wish to hone their skills further as well as professionals who can demonstrate at least 5 years of experience in a field related to gender/sexuality issues who wish to take their career further.</p>
Approach	<p>The Master’s degree consists of:</p> <ul style="list-style-type: none"> • Six compulsory core modules (30 ECTS): each university has created a core module especially for the degree. These modules form the solid theoretical and methodological base of the programme. • A research-based dissertation OR a traineeship-based dissertation (dissertation coupled with a 64-hour traineeship in a professional environment) (15 ECTS) • Optional modules: free choice between modules from all six universities (15 ECTS) <p>The Master’s is both multidisciplinary and interdisciplinary. The current fields of research include: Psychology, Arts and Humanities</p>
Results	<p>Not yet available as the programme was only launched for the first time in September 2017 (academic year 2017/18).</p>
Resources	<p>Unknown.</p>
Evaluation	<p>An evaluation is planned.</p>
Good practice	<p>The measure is defined as good practice because it allows both gender issues as well as the growing demand for experts on gender issues to be addressed and legitimises gender studies in the academic sphere.</p> <p>https://uclouvain.be/en-prog-2019-genr2mc (EN), https://uclouvain.be/prog-2019-genr2mc (FR), https://www.ulb.be/fr/programme/ms-genr (FR), https://www.programmes.uliege.be/cocon/20192020/en/formations/bref/H3GENR01.html (FR)</p>

Source: WP 3 survey

Table 15: Gender Mainstreaming Decree, Wallonia-Brussels Federation – Belgium

Description of the measure	<p>Decree relating to Gender Mainstreaming, adopted on 7th January 2016 by the Parliament of the Wallonia-Brussels Federation, to move towards real equality by systematically adopting a gender perspective in the review of each decision, budget or regulation adopted by its governing bodies or by the government itself. Therefore, in the research sector, as in other competences of Wallonia-Brussels Federation, the gender dimension be explicitly considered in the implementation of public policies.</p> <p>Regarding other gender mainstreaming policies, the Wallonia-Brussels Federation decree contains some innovative elements:</p> <ul style="list-style-type: none"> • The gender test is a formal requirement for all the projects that are listed in the Implementing Orders (Art 2 – IO 10/05/2017). As a result, all competences of the Wallonia-Brussels Federation are affected and reviewed (and not just one or two of them). • The gender test requires not only a gender analysis of the project but also concrete and practical change propositions to make the project more respectful of the equality between men and women. • Training is planned for all members of ministerial offices and administrations in charge of the two procedures.
Objective	<p>By integrating the gender dimension into the policies and budgets of the Wallonia-Brussels Federation, gender mainstreaming aims to:</p> <ul style="list-style-type: none"> • Highlight the differences and inequalities between women and men in the framework of its competences • Invite the administration or government members to question the impact of their decisions, policies or budgets on these inequalities • Take political decisions to change those policies, decisions and budgets that have a negative impact on equality between women and men, or that strengthen an existing inequality • Achieve real equality between women and men in the French-speaking community in Belgium (not only equality of rights).
Target group	All members of administration and government in Wallonia-Brussels Federation
Approach	<p>The Decree and its Implementing Order (25/05/2016 – 10/05/2017) regulate the system and procedures for the integration of the gender dimension into the policies and budgets of the Wallonia-Brussels Federation. This system is composed of:</p> <ul style="list-style-type: none"> • A Coordination group, made up of members of the ministerial offices and administrations in charge of implanting the goals of the decree; • A gender support group (Cellule d'appui en genre) integrated into the Department of Equal Opportunity and in charge of coordinating the implementation of the Decree and providing administrative and scientific support to ministerial offices and administrations; • Two procedures which are binding and applicable since 1st January 2017: <ul style="list-style-type: none"> – Gender test: before adoption by the Parliament, review of each policy project by measuring its impact on the equality between men and women. – Gender budgeting procedure: integration of the gender perspective into the budget and identification of: <ul style="list-style-type: none"> – Credits specially dedicated to equality between women and men – Credits that may have an impact on equality between women and men • Training courses for members of ministerial offices and administrations who are in charge of these two procedures.
Results	<p>The Gender Mainstreaming Decree is a 'young' measure. Accordingly, the first results relate to the implementation of the system: coordination group composition, creation of the gender test form and gender budgeting procedure, creation of the training courses.</p> <p>Nevertheless, some other results are also already available:</p> <ul style="list-style-type: none"> • Budget 2017: 106 credits have been coded through the gender budgeting procedure. • Since May 2017: each policy project concerned has to pass a gender test. • 100 members of ministerial offices and administrations have been trained.
Resources	The gender support group has two full-time members of staff dedicated to coordinating the implementation of the decree.
Evaluation	An evaluation is planned.
Good practice	The measure is defined as good practice by the respondent because gender mainstreaming and gender budgeting are indispensable tools to move to real equality between women and men. Specific actions to promote equality are not sufficient, our society and our government need to question all their systems, procedures, decisions and actions. Gender mainstreaming and gender budgeting are the way to do it.

Source: WP 3 survey

Table 16: UNESCO Chair in Gender Equality and Women’s Empowerment, Cyprus

Description of the measure	<p>Since its establishment in 2009, the UNESCO Chair in Gender Equality and Women’s Empowerment of the University of Cyprus has been aiming at promoting equality, respect for human rights and democracy through an integrated system of research, documentation, education, training and interventions in society that prevents gender inequality.</p> <p>An interdisciplinary postgraduate programme in Gender Studies was therefore developed and coordinated by the Department of Education of the University of Cyprus and the UNESCO Chair.</p> <p>The activities include research, reports, seminars, lectures, networking and collaboration on a national, European and international level.</p>
Objective	<p>The long-term objective is to promote an integrated system of research, training, information and documentation activities in the field of women’s and gender studies in all partner countries. The measure also aims to sensitize policy makers, the public, mass media, public and private sector employees and employers to the issues of gender mainstreaming and the quality in equality.</p> <p>The follow-up objectives are to:</p> <ul style="list-style-type: none"> • Set up research guidelines • Standards for all the indicators of gender mainstreaming • Insert the gender dimension in all training and education centres and higher, secondary and primary education institutions (in Cyprus and in the participating countries) • Create and disseminate ‘good practices’ for effective qualitative interventions that promote gender mainstreaming and equality • Based on the analysis of sex and gender and the investigation of the roots of inequality to combat and prevent gender-based violence and intersectionality of inequality in terms of age, education and socioeconomic level
Target group	<p>Boys and girls, men and women in all the network countries (Cyprus, Greece, Italy, Spain, France, Finland, Romania, Lithuania, Portugal, Slovenia, Ukraine, Latvia, Lebanon and Egypt) and the Global Network of UNESCO Chairs in Gender Equality</p>
Approach	<p>Several approaches are used in the different activities in this measure:</p> <ol style="list-style-type: none"> 1. Research (selected): <ul style="list-style-type: none"> • Daphne III European programme: “An indirect harmful effect of violence: Victimized the child and Re-victimizing the woman-mother through her child’s exposure to violence against herself” (2009-2011). • “The profile of the woman politician in Cypriot Television. A gendered analysis” funded by the University of Cyprus (2010-2012). • “CODE-IWP, Commitment to Democracy through Increasing Women’s Participation” funded by the European Commission, JUST (2016-2017). 2. Coordination of the Gender Studies postgraduate programme. 3. Organisation of key conferences and workshops hosted by the Chair. 4. Interuniversity exchanges/partnerships (principal exchanges/partnerships between the Chair and other institutions including UNESCO Chairs/UNITWIN networks). 5. Publications/multimedia materials and other.
Results	<p>The results depend on the fulfilment of the objectives:</p> <ul style="list-style-type: none"> • Research indicating gender inequality and intervention to policy makers and the academic community through reports, organisation and participation in conferences, publications and seminars. • Enhancement of networking at national, European and international level. • Successful running of the Gender Studies programme through which the University of Cyprus educates youth and the stakeholders for a community of equality. • Cooperation with UNESCO Headquarters and Field Offices.
Resources	<p>There are both human and material resources:</p> <ul style="list-style-type: none"> • Human resources: chair holder, 2 postgraduate students, administrative team of the Department of Education of the University of Cyprus, researchers paid by the funding agent. • Material resources: offices, electronic equipment, library and annual budget.
Evaluation	<p>The evaluation is conducted by the UNESCO central office in Paris and is repeated every year through the annual reports and every 4 years for the renewal of the agreement and chairing.</p>

Good practice	<p>The measure is defined as good practice by the respondent as ERA countries can enrich their research by the gender dimension and also contribute to changing the inequality which is hidden behind declarations and conventions without any implementation in praxis.</p> <p>The development and coordination of the postgraduate programme along with seminars and training for specific groups in society, youth, parents, students, boys and girls as well as the Chair's strong national and international network are considered to be the innovative elements of this measure. Additionally, great importance has been placed on research and documentation which promote awareness and research-based information on gender issues.</p>
Further information	http://www.ucy.ac.cy/unesco/en

Source: WP 3 survey

Table 17: Research-Oriented Standards on Gender Equality with Toolbox, Germany

Description of the measure	<p>The member organisations of the German Research Foundation (DFG) adopted the Research-Oriented Standards on Gender Equality (www.dfg.de/gender_equality_standards) in 2008 and renewed their commitment 2017. By entering into this voluntary commitment, they defined structural and personnel-related standards for a sustainable equality policy in the scientific and university landscape. Part of the initial concept to implement the Standards was the Toolbox. Since its development in 2009, this toolbox has been revised and modernised several times. The Toolbox is a freely accessible online information system that presents examples illustrating the possible breadth of gender equality measures in research and teaching in keeping with the DFG's Research-Oriented Standards on Gender Equality (https://instrumentenkasten.dfg.de/index_en.html).</p>
Objective	<p>There are several objectives of this measure:</p> <ul style="list-style-type: none"> • To help establish sustainable gender equality policies in the scientific and university landscape. • To set structural and personnel-related standards for the specific equality policies. • To significantly increase the share of women at all academic career levels according to the so-called cascade model (which defines targets for the share of women at each career level based on the share of women at the next lower level). • To present real-life examples of gender equality measures in German higher education institutions. • To promote the implementation of similar practices elsewhere by adhering to the Research-Oriented Standards on Gender Equality.
Target group	<p>This measure is aimed at DFG member organisations (German research universities, non-university research institutions, scientific associations and the Academies of Science and the Humanities) and their staff as well as applicants for DFG funding and equal opportunities experts.</p>
Approach	<p>The DFG's member organisations have been submitting reports in changing forms (2009-2013 three reports on their gender equality strategies, 2014-2016 annual monitoring of their share of female scientists and since 2017 qualitative reports on varying gender equality topics every three years) on the implementation of the Research-Oriented Standards on Gender Equality in their organisations to the DFG.</p> <p>The currently 275 real-life examples in the Toolbox are selected in a quality-assured process to ensure that they are of high quality and thematically varied. The Toolbox gives users ideas and inspiration for their own work as well as the option to submit measures of their own for inclusion in the database.</p>

Results	<p>An evaluation in 2017 analysed the implementation and impact of the Equality Standards, documenting the positive effects on the German scientific and academic landscape. The reports submitted by the member institutions illustrate the positive momentum set in motion by the Standards, which can be seen at almost all institutional levels. Gender equality is now seen as a strategic management task and as a sign of quality. The DFG's Gender Equality Standards have brought about organisational and cultural changes and conditions that are characterised by increased equal opportunities in the member institutions. The Toolbox has been identified as a helpful tool within this progress.</p> <p>On the basis of this evaluation, recommendations have been formulated on the future of the Research-Oriented Standards on Gender Equality, which were approved by the General Assembly of the DFG and the DFG member organisations in July 2017. In line with these recommendations, the member organisations renewed their voluntary commitment to the Standards in order to anchor gender equality measures within the institutions in the long term. It is planned that qualitative reports will be prepared every three years with changing key topics. This will make it possible to examine both successful and unsuccessful case studies with a view to initiating peer learning. The first submission of these reports is planned in 2019.</p> <p>The Toolbox will be opened to and applicable for non-university research institutions. For its long-term maintenance, the responsibility for it should be transferred.</p>
Resources	Unknown because they depend on the member organisations' resources. The Toolbox resources are defined at approx. € 50,000.
Evaluation	The evaluation is available (in German) at https://www.dfg.de/dfg_profil/zahlen_fakten/evaluation_studien_monitoring/studien/studie_gleichstellungsstandards/index.html
Good practice	The measure is defined as good practice because both the Research-Oriented Standards on Gender Equality and the Toolbox and its measures are innovative as such. Due to their different approach in comparison to previous models, they can address current problems or offer new and innovative solutions. Furthermore, it is claimed that its support of advancements in Gender Equality is evident (positive effects of the Standards on the German scientific and academic landscape were documented in the evaluation).
Further information	www.dfg.de/gender_equality_standards https://instrumentenkasten.dfg.de/index_en.html

Source: WP 3 survey

Table 18: Recruiting Initiative, Germany

Description of the measure	Every research institution's profile is shaped by the people who are responsible for its scientific leadership. As scientific leadership positions involve joint professorial appointments with universities, they serve as an important bridge between the Helmholtz Association, a non-university research organisation, and its university partners. In the past few years, the Helmholtz Association has been able to attract many excellent young scientists through successful instruments of the Initiative and Networking Fund such as the 'Helmholtz Young Investigators Groups' and the 'W2/W3 positions for outstanding female professors'. The efforts made to recruit excellent national or international scientists, in particular female scientists for key positions at Helmholtz Centres, shall therefore be continued in this measure.
Objective	Continuing the successful recruitment of excellent young scientists and strengthening these efforts by means of its recruiting initiative, particularly through: <ol style="list-style-type: none"> 1. joint professorial appointments with universities, and 2. early filling of senior management positions that become vacant.
Target group	The target groups have to fulfil the criteria below, prioritised as follows: <ol style="list-style-type: none"> 1. Internationally recognised expertise (as determined by factors such as the researchers' publications and citation frequency, current appraisals and curriculum vitae). 2. Excellent female researchers (overall, at least a 50 percent quota for female researchers should be met). 3. An international background (recruitment abroad). 4. Recruiting researchers from industry is expressly encouraged.
Approach	There are three internal calls for the 18 Helmholtz Centres.
Results	Altogether, 48 recruitments were realized, 30 thereof for women. In 2018, a new instrument (international recruiting initiative for top female scientists) was launched.
Resources	€ 32 million
Evaluation	No
Good practice	The innovative element of this measure is the permanent funding.
Further information	https://www.helmholtz.de/fileadmin/user_upload/publikationen/2013/Helmholtz_Brosch%C3%BCre_Nachwuchs2012_WEB.pdf (in German)

Source: WP 3 survey

Table 19: National Pact for Women in STEM Careers, Germany

Description of the measure	The pact is a joint initiative of the German Federal Ministry of Education and Research and partners from industry and science that has been in place since 2008. Its aim is to attract considerably more young women to professions in STEM areas.
Objective	The aim of the national pact is to address the emerging skills shortage by utilising the potential of women in STEM professions. This requires conveying a realistic picture of STEM professions and pointing out the opportunities for women in these fields, stimulating their interest in STEM-related degrees and attracting female university graduates to a career in technical companies and research organisations.
Target group	Young women at the transition between school and higher education as well as between higher education and career (note: higher education includes universities of applied sciences).
Approach	The National Pact for Women in STEM professions is the only nationwide networking initiative which attracts girls and women to courses of study, occupations and careers in STEM. It links more than 250 partners from government, industry, science and the media and translates the dialogue on women and STEM into innovative measures.
Results	<ul style="list-style-type: none"> • Creation of a huge network of partners from government, industry, science and media. • Establishment of an agency as contact partner and service provider. • Online platform www.komm-mach-mint.de, including a project map with more than 1000 projects nationwide. • Yearly network conference for information exchange and conducting thematic workshops. • Podcast series and interviews with role models. • 4 brochures (one on each STEM area) providing career orientation for girls as well as accompanying information material for teachers. • Image database with gender-sensitive pictures.
Resources	€ 3-4 million per year (funding of agency and projects).
Evaluation	Yes
Good practice	The measure is defined as good practice by the respondent as it creates synergies through bundling existing measures and increased exchange of experience and information. It also includes innovative formats for the target group of girls and young women (e.g. Meet.Me; Women-STEM-Slam) and its network consists of representatives from companies, researchers and other multipliers.
Further information	http://www.komm-mach-mint.de/ (in German)

Source: WP 3 survey

Table 20: Programme for Women Professors of the German Federal Government and the Länder, Germany

Description of the measure	The Programme for Women Professors was introduced by the Federal Government and the Länder in 2008 as a measure towards fixing the leaky pipeline in research and academia (Phase III is currently underway from 2018 to 2022). The programme works on two levels: It increases the share of female professors at German universities and strengthens equal opportunities structures at universities.
Objective	The aim of the Programme for Women Professors is to promote the equality of men and women at universities, increase the representation of women at all levels of qualification in the research system on a long-term basis, and boost the number of female scientists and scholars in leading positions in academia. The Federal Government and the Länder therefore want to support the efforts of universities in the area of equal opportunities. Increasing the number of women professors is also intended to encourage young women to enter higher education and pursue careers in research.
Target group	Universities (including universities of applied sciences and colleges of music and art).
Approach	Universities qualify for participation in the programme by submitting equal opportunities plans. These plans must include an analysis of strengths and weaknesses concerning equal opportunities efforts to date, statements on the specific equal opportunities targets of the university concerned and their projected implementation, especially with regard to: <ul style="list-style-type: none"> • increasing the number of women in leading positions in science and academia, • developing career and employment opportunities for young female researchers and academics, and • attracting female students to subjects in which women are underrepresented. The submitted plans are evaluated externally by an independent expert committee. Each university that provides a convincing equal opportunities plan can receive start-up funding for up to three first-time female professorship appointments over a period of up to five years. The following conditions must be met: <ul style="list-style-type: none"> • The professorships must be permanent positions/civil servant positions/ life-time posts. • The start-up funding is provided only for fully tenured professorships (grades W2 and W3) and not for so-called Juniorprofessuren (W1). • The best candidate is selected following a normal appointment procedure open to both men and women (with no ‘women only’ job advertisements); funding can only be applied for where a post is filled by a woman.
Results	528 professorships supported so far (January 2018). Contribution to the increase in the share of female professors at German universities. Nationwide strengthening of equal opportunities structures at universities. Implementation of numerous university-specific equal opportunities measures for the programme’s target groups: female students (in subjects in which women are underrepresented), female junior scientists, academics and professors; a large proportion of measures are continued beyond the end of their respective funding periods. Change in culture: re-evaluation and strengthening of the importance of equal opportunities within universities, increased importance attached to persons with responsibilities for equal opportunities, conceptual advancement of equal opportunities policy at universities. Positive evaluations in 2012 and 2017 (each leading to the programme’s prolongation for 5 more years).
Resources	Overall funding (until 2022): € 500 million (Phase I: € 150 million, Phase II: € 150 million, Phase III: € 200 million) shared 50% between the Federal Government and the Länder.
Evaluation	Phase I: http://www.hof.uni-halle.de/dateien/ab_6_2012.pdf and http://www.hof.uni-halle.de/dateien/ab_6_2012_anhang.pdf ; Phase II: http://nbn-resolving.de/urn:nbn:de:0168-ssoar-54112-9 (in German) Article in English: https://www.mdpi.com/2076-0760/8/4/116
Good practice	The measure is defined as good practice by the respondent b the evaluations show that the combination of two elements (increasing the share of women professors and achieving structural changes concerning equal opportunities) has a proven effect. In addition, the mere development of equal opportunities strategies is already initiating a cultural change within universities. The programme is also defined as innovative by the respondent because it aims both to increase the share of women professors and to firmly establish equal opportunities measures within university structures. This is achieved, for example, through funding for professorships that are already included in university budgets (so-called Regelprofessuren, i.e. regular professorships). In such cases, the funds in a university’s budget which are freed up in this way must be used for additional equal opportunities measures.
Further information	https://www.bmbf.de/de/das-professorinnenprogramm-236.html (in German)

Source: WP 3 survey

Table 21: Funding for Networking and Transfer (Network Activities), Germany

Description of the measure	Funding is provided for measures to strengthen transfer and networking activities in the field of ‘Strategies to realize equal opportunities for women in education and research’. The aim is to forge and expand innovative research collaborations, to promote the national and international exchange of experience to safeguard specialist excellence and to support networking activities with regard to the transfer and consolidation of the relevant results. The program runs from 2012 to 2020.
Objective	<ul style="list-style-type: none"> • Advancement of women in education and research, at work and in society as well as the implementation of gender equality. • Exploitation of the innovative potential of gender research to stimulate science and encourage societal change. • Provision of national and international exchange of experience to guarantee academic excellence. • Support of networking activities to transfer and consolidate results (especially results from the ‘More women at the top’ funding line which ended in 2015).
Target group	The target group of the measure are (excellent) female scientists especially from medical research, economics, life sciences, physical sciences and gender studies as well as practitioners in gender equality and representatives from research institutions.
Approach	Funded projects address the integration of gender aspects, particularly in the field of medicine, economics, engineering and the natural sciences, or previously neglected topics of gender research. They support the development of equal opportunities recommendations and strategies in education, research and science and promote the dialogue between science and practice. The project teams present their innovative approaches and new findings to a wider public nationwide to promote the transfer and consolidation of results.
Results	<p>The call for proposals is closed. Funding is being provided for the successful implementation of 42 projects between 2012 and 2020. Of the 42 applications approved, 24 were individual projects and 8 collaborative projects.</p> <p>The funded projects have triggered a large number of events and publications of different formats and aimed at various target groups. Exchanges of experience and networking activities have strengthened the translation of research findings to enhance equal opportunities in science and practice.</p> <p>To name but a few examples: Successful implementation of the ‘International Congress of Gender Medicine - Junior meets Senior’ in Berlin (22/23 September 2016) and the ‘Gender2020 Conference on Guiding a Change of Culture in Science’ in Bielefeld (27/27 January 2017); finalization of the database for ‘Family-friendly science’ which will be continued by GESIS from 2019 on (https://www.gesis.org/cews/themen/familienfreundliche-wissenschaft/); publication of a brochure on ‘Women in tomorrow’s digital world of work’ with a preface by the Minister and publication of a brochure ‘Recommendations for the Hospital of the Future: How to succeed with gender equality and family friendliness in the daily hospital routine’.</p>
Resources	Approx. € 6.8 million for the projects currently approved.
Evaluation	No.
Good practice	The measure is defined as good practice by the respondent for several reasons. In general, female scientists do worse in networking than their male colleagues. The described measure (Networking Activities) has led to stronger networking and networking activities among the participating scientists. It has also had a positive effect on the dissemination of results of gender studies in science and the public. The measure brings together scientists from various academic disciplines with gender studies experts. Furthermore, it supports the science-practice dialogue in order to benefit from the potential that the gender studies have on other disciplines and on the societal discourse.
Further information	The measure is based on regulations governing the funding of measures to strengthen innovative research collaborations and promote networking activities to develop ‘Strategies to realize equal opportunities for women in education and research’ of 29 August 2012. https://www.jurion.de/gesetze/chancgerfraubfrrl/?from=1%3A5165878%2C1%2C20120918 (in German)

Source: WP 3 survey

Table 22: Implementing Talent Policies / Gender Policies, The Netherlands

Description of the measure	The Ministry of Education, Culture and Science informed parliament about a new initiative for gender policy as part of its policy on the field of scientific talent in a letter in January 2017. The NOW research council has developed a special call – the Westerdijk Talentimpuls – in which € 5 million are being made available over the next 5 years to attract suitable female candidates. If the universities follow this policy, each faculty will have on average one extra female professor by the end of the year. Universities could prepare their proposals for the now call to nominate women professors until the deadline (10 February 2018). The VSNU, the Dutch Association of Universities, will monitor if universities do indeed appoint 100 more professors than the previously agreed target of 200 more professors in 2020.
Objective	On 10 February 2017, it was exactly 100 years since the first woman, Johanna Westerdijk, was appointed as a professor at Utrecht University in The Netherlands. To mark this anniversary, Dutch universities were asked to employ 100 more female full professors than they currently did by the end of the year. This was on top of previous agreements with the universities on appointing 200 female professors by 2020.
Target group	Women associate and assistant professors; universities.
Approach	Universities receive a financial incentive to compensate them for the extra salary resulting from the promotion of an assistant professor to a full professor.
Results	Not yet available. The deadline for submissions was 10 February 2018 (one year after the opening of the Westerdijk Year).
Resources	€ 5 million for 5 years.
Evaluation	An evaluation is planned.
Good practice	No assessment of whether the measure is a good practice.
Further information	https://www.nwo.nl/en/funding/our-funding-instruments/nwo/westerdijk-talent-scheme/westerdijk-talent-scheme.html

Source: WP 3 survey

Report on Monitoring of ERA Priority 4 Implementation

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