

National plans and initiatives promoting gender equality and structural change



GENDER-NET

PROMOTING GENDER EQUALITY IN RESEARCH INSTITUTIONS AND
INTEGRATION OF THE GENDER DIMENSION IN RESEARCH CONTENTS



Acknowledgments



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Table of Contents

EXECUTIVE SUMMARY	5
1. Introduction	7
1.1. GENDER-NET ERA-NET (2013–2016).....	7
1.2. Report focus.....	9
1.3. Methodology.....	9
2. National Initiatives	11
2.1. Identifying decision-making structures and procedures at regional/national level	11
2.1.1. Introduction.....	11
2.1.2. Legislation on gender balance.....	12
2.1.3. Dedicated national units.....	14
2.1.4. Gender action plans.....	17
2.1.5. Gender equality units/officers and networks.....	20
2.1.6. National gender equality plans.....	21
2.1.7. Sex-disaggregated statistics.....	23
2.1.8. Equal pay.....	24
2.2. Anchoring gender equality issues at leadership level	25
2.2.1. Introduction.....	25
2.2.2. Top-level leadership committees.....	25
2.2.3. Training on gender equality.....	26
2.2.4. Other initiatives.....	27
2.3. Recruitment, retention and advancement of women researchers, including leading positions	28
2.3.1. Introduction.....	28
2.3.2. Measures to improve the institutions' gender equality work.....	28
2.3.3. Measures aimed at individual women researchers.....	37
2.4. Improving work environment, work-life balance and dual-career opportunities	38
2.4.1. Introduction.....	38
2.4.2. General welfare benefits.....	39
2.4.3. Parental/child benefits and employment-related regulations.....	39
2.4.4. Dual-career initiatives.....	42

2.4.5. Anti-harassment measures	43
2.5. Facilitating in-/outgoing researcher mobility for women researchers	44
2.5.1. Introduction	44
2.5.2. Economic incentives	45
2.5.3. Legislation	47
2.5.4. EURAXESS	47
3. Analysis	48
3.1. Identify decision-making structures and procedures at regional and national levels	48
3.1.1. Main findings	48
3.1.2. Discussion	49
3.2. Anchoring gender equality issues at leadership level	50
3.2.1. Main findings	50
3.2.2. Discussion	51
3.3. Recruitment, retention and advancement of women researchers, including leadership	51
3.3.1. Main findings	51
3.3.2. Discussion	52
3.4. Improving work environment, work-life balance and dual careers	53
3.4.1. Main findings	53
3.4.2. Discussion	54
3.5. Facilitating in-/outgoing researcher mobility for women researchers	55
3.5.1. Main findings	55
3.5.2. Discussion	55
3.6. Future monitoring, statistics and indicators	56
3.7. Conclusions and recommendations	58
3.7.1. Recommendations	59
APPENDIX	60
Appendix 1: Summary chart	60
Appendix 2: Template for assessment	60

Executive summary

This report analyses national and regional best practice examples which aim to have an impact on gender equality in research institutions. The aim was not to describe all initiatives that exist but to identify pro-active and innovative initiatives that can serve as a basis for recommendations for transnational activities. Partners and observers of GENDER-NET share a common commitment to the promotion of gender equality in research, and most of them are regarded as key players at European and international levels. Hence, the scope was limited to GENDER-NET partners and observers, and they were asked to report on selected initiatives in their country. The research focused on the following aspects:

- objectives and description of each initiative;
- ways of implementation;
- the existence of success criteria and evaluations; and
- legal, cultural or other aspects that could impact transferability.

The respondent countries were Belgium, France, Germany, Ireland, Norway, Slovenia, Spain, Switzerland, the UK and the US.

The report describes a wide range of national measures promoting gender equality in higher education and research institutions. As national contexts vary, so too does the design of measures. The material collected in this study is generally rich as regards gender equality legislation, plans and regulations, and there are some good examples of mechanisms that contribute to the implementation of laws and plans. There are also many examples of targeted, comprehensive initiatives for enhancing gender balance through institutional change. All these measures have proved to have a positive effect on gender equality. On the other hand, the material contains relatively few examples of measures aimed at improving leadership involvement, international mobility and work-life balance.

It is also somewhat surprising that the material does not include examples of overall assessments of how the different measures are interlinked in the given national contexts. This could, in part, stem from a weakness in the template used to collect the information, since the questionnaire does not explicitly ask for such information. Nonetheless, the study indicates limited reflection on the integration of various national measures. There seems to be a great potential for further development of national measures that address different aspects of academic career development. For instance, funding schemes would benefit if the recruitment and retention of women, mobility, dual careers and work-life balance were addressed together. The material shows that this is rarely the case.

To achieve structural change, gender has to be mainstreamed in all areas. It would be beneficial to consider family commitments and dual-career constellations as the norm when developing human resources policies or reflecting on career development in general. If dual-career constellations and family commitments are regarded as the norm, this would also benefit researchers with fewer engagements. The result would be a better work-life balance for all.

Although leadership commitment and involvement are considered to be vital to structural change, methods for involving and committing management at different levels are still in an early phase. There is a potential for developing new methodologies to improve leadership involvement. National and institutional initiatives should be combined in this context.

A gender-responsive national policy context, such as legal and policy frameworks and initiatives, is a prerequisite for enacting structural change in research institutions. A general shift from measures targeted at individual women researchers career development to measures that promote women in research through improving institutions' gender equality work can be observed. This report documents that a lot of important activity aiming at supporting gender equality is going on. However, promoting sustainable structural change remains the main challenge.

Funding mechanisms are structural means. The material provides successful examples of how gender equality considerations can be embedded in funding mechanisms with significant impact on gender balance, which implies a broader range of researchers, lesser waste of talent, and thereby improving the quality and relevance of research.

1. Introduction

This research was undertaken as part of the GENDER-NET ERA-NET project (2013–2016). The report summarises national and regional initiatives undertaken by project participants to stimulate gender equality and enact structural change with regard to gender equality in research institutions.

This research was conducted in parallel with two other reports. One report investigates institutional initiatives that are conducted within the framework of national/regional initiatives. The aim is to gain knowledge of the impact of national/regional initiatives at an institutional level. Another report researches the impact of award schemes aimed at creating greater gender equality. The three reports together will form the basis for later work in the project to develop transnational initiatives to boost gender equality and common indicators of structural change.

1.1. GENDER-NET ERA-NET (2013–2016)

GENDER-NET is a pilot transnational research policy initiative funded by the European Commission under the Science in Society work programme of the seventh Framework Programme (FP7). This European Research Area Network (ERA-NET) is designed to address the common challenges still facing European research institutions in achieving gender equality in research and innovation. These challenges concern the persistent barriers and constraints to the recruitment, advancement and mobility of women in the European academic system, the lack of women in decision-making positions, and the limited integration of the gender dimension in research programmes and content. GENDER-NET brings together a balanced partnership of twelve national programme owners from across Europe and North America (i.e. ministries, national research funding agencies or national organisations) with a shared commitment to gender equality and synergistic expertise in gender and academic issues. More information on GENDER-NET can be found on the project's website: www.gender-net.eu

The Research Council of Norway is a GENDER-NET partner, and co-Leader of work package 2, dedicated to "Gender Equality in Research Institutions through Structural Change". The Research Council is also the owner and manager of BALANSE, one of the programmes considered in this research, and it therefore has an interest in ensuring that this scheme is successful.

GENDER-NET Partners:

- CNRS (France) Centre National de la Recherche Scientifique (project coordinator)
- MENESR (France) Ministère de l'Éducation Nationale, de l'Enseignement Supérieur et de la Recherche
- MINECO (Spain) Ministry of Economy and Competitiveness/Secretariat of State for Research, Development and Innovation
- ECU (UK) Equality Challenge Unit

- WBF (Switzerland) Department for Economy, Education and Research of the Swiss Confederation /State Secretariat for Education, Research and Innovation
- CIHR (Canada) Canadian Institutes of Health Research
- HEA (Ireland) The Higher Education Authority/Irish Research Council
- F.R.S. - FNRS (Belgium) Fonds de la Recherche Scientifique
- RPF (Cyprus) Research Promotion Foundation
- MESS (Slovenia) Ministry of Education, Science and Sport
- NAS (USA) National Academy of Sciences
- RCN (Norway) Research Council of Norway

GENDER-NET Observers:

- DFG (Germany) German Research Foundation
- DNCD (Germany) Dual Career Network Germany
- NSERC (Canada) Natural Sciences and Engineering Research Council of Canada

Expert Advisory Board:

- Anke Lipinsky (Germany) GESIS-Leibniz Institute for the Social Sciences, Center of Excellence Women and Science
- Alice Hogan (US), Consultant, former National Science Foundation
- Londa Schiebinger (US) Professor, Stanford University
- Carl Jacobsson (Sweden) Director, Swedish Research Council
- Gerd Karin Bjørhovde (Norway) Professor Emerita, UiT The Arctic University of Norway
- Hans M. Borchgrevink (Norway) Gender Summit Steering Committee, Research Council of Norway (retired)

Based on the mutual opening of their respective national programmes and policies, partners have joined forces to

- carry out joint assessments of existing national/regional initiatives;
- define priority areas for transnational collaborations; and
- implement a selection of strategic joint activities.

This was undertaken in an effort to reduce fragmentation across the European Research Area and help reach a critical mass of ministries, research funders, universities and research institutions across Europe engaging in the development

and implementation of gender equality plans or related initiatives, and requesting gendered contents in research programmes and projects.

1.2. Report focus

The focus of this report is national and regional initiatives that can be expected to have some impact undertaken by project participants to promote gender equality in research institutions through structural change.

This report will consider whether the initiatives can contribute to structural change and will identify successful elements that could be recommended for transnational implementation.

According to the 2011 European Commission report entitled “Structural change in research institutions: Enhancing excellence, gender equality and efficiency in research and innovation” (European Commission 2011), *structural change* is here defined as a change in institutions in terms of the representation and retention of women at all levels of their research careers.

The preconditions for and essential elements of structural change are:

- the creation of an evidence base, e.g. through sex-disaggregated data on recruitment, retention, promotion, pay, and committee representation; gender impact assessments; and staff surveys;
- the augmentation of top-level support; and
- the development of management practices that recognise and aim to mitigate or overcome gender barriers.

Structural change means

- making decision-making practices more transparent;
- removing unconscious bias from institutional practices;
- promoting excellence through diversity;
- improving research by integrating a gender perspective; and
- modernising human resources management and the working environment.

The project aimed to cover the following themes: decision-making structures and procedures; anchoring gender equality issues at leadership level; recruitment, retention and advancement of women researchers (including leading positions); work environment, work-life balance and dual careers; and in-/outgoing mobility for women researchers. Hence, the description of *initiatives* used in this report is structured according to these themes.

1.3. Methodology

The research aimed to collect national/regional initiatives that could be described as “best practises” from project participants (partners and observers). The aim was not to describe all initiatives that exist but to identify pro-active and

innovative initiatives that could serve as a basis for recommendations for trans-national activities. Partners and observers of GENDER-NET share a common commitment to the promotion of gender equality in research, and most of them are regarded as key players at European and international levels. Hence, partners and observers were asked to report on selected initiatives in their country.

On 10 February 2014, a template for assessment of national/regional initiatives was sent to all partners that had agreed to participate in the research, plus to the German observers who had also decided to participate. Two examples of how to fill in information were sent along with the template. The template and information were also presented to partners, observers and members of the Expert Advisory Board at the GENDER-NET consortium meeting in Brussels on 26–27 March 2014.

In the template, respondents were asked to describe each initiative, including its goals, how it is implemented, whether there are delineated criteria or indicators of its success, whether there has been any evaluation of its success, its main impact and any legislative, organisational or cultural aspects that will impact its transferability to other countries. The template for assessment is attached to this report (see Appendix 2).

Only a few respondents managed to respond the initial deadline of 28 February 2014. By July, the Research Council of Norway had received most of the replies regarding relevant initiatives from partners and observers. After receiving the responses, the Research Council asked the respondents any requisite follow-up questions by email.

The length and quality of the responses differed significantly, as did the response time on the assessment and follow-up questions. Hence, the Research Council undertook an extensive amount of research to provide the supplementary information that was needed for the analysis. Since a significant amount of the information was provided through the Research Council's own research and through follow-up questions, the original responses are not included in an appendix.

Chapter 2 describes examples of measures reported by partners and observers. The Research Council had to make a choice about which examples to include in the report in order to limit the length of the text. Some measures are described in detail to provide a good understanding of the concrete example, while others are described more briefly. The Research Council is aware of the fact that not all partners have reported on all the relevant measures in their country. However, the purpose of this report is to give examples of “best practises” and not an exhaustive overview of all measures.

A summary chart is presented in Appendix 1.

2. National Initiatives

In this chapter, we give examples of the assessments received from the countries involved in GENDER-NET. We will describe how the countries are dealing with gender equality in the research sector at national level.

It is important to recognise that the different measures described in this report are part of a larger package, consisting of each country's national legislation and on more specific regulations and measures each country has in place for the research sector or even the overall public service. In addition, the countries have different cultures and understandings of how to deal with regulations, legal frameworks and measures. It is important to have in mind when reading this report that national measures targeted towards the research sector are always established within that country's context.

2.1. Identifying decision-making structures and procedures at regional/national level

2.1.1. Introduction

In this chapter, we describe different regulations (legislation, rules, routines, procedures) at the national level that can have a positive influence on women's research careers.

The existence and comprehensiveness of such structures varies significantly among the countries that have participated in this assessment. All countries have legislation on gender equality and on higher education and research that provides a more general framework, which is a necessary basis for targeted initiatives and measures. In addition, the countries have reported different kinds of regulations and legislation that are in place specifically for the research sector. It is beyond the scope of this report to describe all the general legislation that can promote gender equality in the research sector, but we will describe examples of targeted measures introduced in legislation. We start this chapter with a description of legislation on gender balance in committees and bodies reported from three countries. Then, we present national units dedicated to promote gender equality in research. We go on to describe national requirements for gender action plans at the institutional level, followed by gender equality officers, units and networks at the institutional level. We conclude the chapter by presenting national plans and strategies to promote gender equality in research. Legislation on sexual harassment will be outlined in chapter 2.4, “Improving work environment, work-life balance and dual careers.”

2.1.2. Legislation on gender balance

Within ERA, there is an agreed-upon target of at least 40 % participation of each sex in evaluation and recruitment panels¹. This can be achieved through various measures. Three of the assessed countries have reported having legislation on gender balance in the research sector: Spain, France and Norway.

¹ ERA Progress Report 2014

In Spain, three laws are of particular importance regarding the promotion of gender balance in research: the *Law on Equality between Men and Women* from 2007, the *Law of Science, Technology and Innovation* from 2011, and the *Law of Universities* from 2007. The Equality Law states that all public institutions should foster the balanced presence of women and men in selection and evaluation bodies. The Law of Science, Technology and Innovation, which sets the national framework for the promotion and coordination of scientific and technical research, supplements the Equality Law. It recommends confidential evaluation procedures (where the evaluator does not get the personal data of the person being assessed) as a measure to eliminate gender bias and achieve balanced representation. It also states that the institutions have to seek balanced representation of women and men in the selection processes for members of the expert committee boards for university accreditation. The Law of Universities, which regulates the structure and governance of Spanish Universities, supplements the other two laws and obliges the universities to achieve parity in representative/governing bodies. They must also seek a balanced presence of both genders in research groups and in the selection committees for appointing researchers to positions in university faculty bodies. Finally, the committees granting the national accreditation necessary to work in public universities must seek a balanced representation of women and men.

Spain has four different instruments to regulate and monitor the implementation of legislation on gender equality in general. This includes the implementation of legislation on gender equality in research.

1. The *Interministerial Committee on Equality* between women and men is responsible for coordinating gender equality policies and measures adopted by government departments.
2. As specified in the Equality Law, compulsory *equality units* have been established within each ministry to ensure compliance with the law. The equality units are responsible for collecting and analysing statistical information produced by their ministries and for carrying out research in order to promote gender equality within their areas of responsibility. Every ministry has to make a yearly report on gender impact, and the equality units have to advise on the elaboration of this report. In Spain, the research sector lies under the responsibility of the State Secretary for Research, Development and Innovation, within the Ministry of Economy and Competitiveness. The State Secretary's equality unit is the *Women and Science Unit*. This unit was created in 2004, before the Equality Law, as the body responsible for implementing the principle of gender mainstreaming in the fields of science, technology and innovation. Its objectives are to promote the participation of women in research and innovation, to eliminate biases, barriers and disincentives,

and to promote gender as a category of research and innovation. Hence, it contributed to the development of the three above-mentioned laws, which provide the legal framework for gender policies in research.

3. The *Women's Institute at the Ministry of Health, Social Services and Equality* was established in 1983, with a mandate to propose and support policies to improve the situation of women in all fields of policy. Part of its mandate is to elaborate upon the Strategic Plan for Equal Opportunities, discussed below. It also has a division that works directly with Spain's universities and provides financial aid and technical support to their equality units.
4. In the *National Strategic Plan for Equal Opportunities* (2014–2016), the Government defines the objectives and priority areas in its work for gender equality. The plan requires tracking of the implementation of legislation on gender balance. Measures to enhance the presence of women in research teams are requested.

The Spanish legislation discussed above makes it mandatory for research institutions to work for gender balance in committees, on boards and in groups. The National Strategic Plan for Equal Opportunities states that measures should be set up to strengthen the implementation of this legislation, but it does not specify which measures.

The Norwegian Gender Equality Act obliges public institutions to have at minimum a 4:6 ratio of the sexes on boards and panels or in committees. This is also valid for higher education and research institutions. According to the Ministry of Education and Research, this standard requirement has successfully brought Norway, and other Nordic countries, to the lead amongst European nations in the share of women on scientific boards and in management positions.

France has recently adopted legislation on gender balance that includes economic sanctioning: the *Law "Sauvadet" on the reduction of precariousness and professional equality between women and men* (2012) and the 22 July 2013 *Law on Higher Education and Research* (2013).

Law Sauvadet ensures progressive quotas for the yearly appointment/nomination of women and men (% 4:6 ratio of the under-represented sexes by 2018) to positions as high-level civil servants. If those targeted figures are not reached, the administration will have to pay 30,000 euros for each "missed" nomination in 2013, and this will increase to 90,000 euros in 2018. The law also introduces quotas for the underrepresented sex on juries for civil service examinations and other examinations required to work in public administration, e.g. to be hired as a researcher in a university or research institution, as well as quotas for high councils of public administration and boards of public institutions. As

for the higher education and research sector, the concrete implementation of the law is being monitored each year within the Ministry for Higher Education and Research-MESR (now Ministry of National Education, Higher Education and Research-MENESR) through its *Roadmap for Equality between Women and Men*.² But the Roadmap is also a way for the Ministry to go beyond the law and be more active, and the Roadmap for 2013 (which was the first Roadmap) states that already in 2013, the target percentage for representation of the underrepresented sex should be 40%. It adds that this objective is applied to all management positions (administrative positions and the composition of boards) at both universities and public research/education institutions. To reach the objective, the General Directorate for Human Resources will identify women who could be appointed as Director Generals. For academic disciplines with less than 20 % of the underrepresented sex, the share of the underrepresented sex must be doubled in the jury.

The *Law on Higher Education and Research* (also named *Law "Fioraso"*, after the Minister) supplements Law Sauvadet, introducing a legal requirement for a balanced representation of women and men in the governing bodies of universities. The law demands gender-balanced electoral rolls (offering alternating male / female) and gender balance in nominations to national governing bodies of higher education and research institutions. Electoral rolls for all university boards (administrative, academic, etc.) must alternate candidates of the two sexes. Raising the awareness of opportunities for qualified women, so that they are more likely to run for elections, is also planned in the Ministry's Roadmap.

It is important to note that only the targets set in Law Sauvadet are subject to economic sanctions.

2.1.3. Dedicated national units

In our survey, France, Spain and Slovenia reported having units dedicated to promoting gender equality in research within the ministry responsible for the research sector. In France, the unit is the *Equal Opportunities and Anti-Discrimination Office* (at the MESR, now Department for Human Resources Strategy, Parity and Fight against Discriminations at MENESR). In Slovenia, this is the *Commission for Women in Science*. In Spain, this is the *Women and Science Unit* (see 2.1.2). All units work to influence national policy on gender in research and promote gender balance in research. Both the Women and Science Unit and the Equal Opportunities and Anti-Discrimination Office monitor the research sector and report on the implementation and impact of laws and regulations. The latter was established in 2001 and was the first unit dedicated to gender equality within a French ministry. Its objectives have evolved with time, and continue to

² See http://cache.media.enseignementsup-recherche.gouv.fr/file/Charte_egalite_femmes_hommes/57/8/CIDDF_Feuille_de_route_MESR_vf_06_01_2014_291578.pdf

change, but it has worked with human resource strategies, gender in curricula and gender research on national, European and international levels.

It could be argued that having dedicated units within the government to promote gender equality in research is a good way to integrate gender equality into national policies. In addition, the unit can develop/recommend measures to ensure/help the implementation of different laws, regulations and strategies. They can monitor and evaluate this implementation, and they can propose improvements both to policies and to implementation strategies. Such a unit can be crucial to ensure commitment on national/governmental levels to improve gender equality in research.

Norway and the US have established independent committees outside their ministries instead of a dedicated structure within their ministries. The Norwegian Ministry of Education and Research has commissioned the *Committee for Gender Balance and diversity in Research*, eng.kifinfo.no, which has a mandate to support and provide recommendations of measures that can contribute to the mainstreaming of gender equality efforts at all institutions within the research sector. It may also contribute to raising awareness of issues connected to the skewed gender balance in the sector. The committee is understood as being independent of national policies and priorities, and it is free to develop its own reasoning and methods. It functions as an advisory body both to the Ministry and to institutions and other relevant stakeholders.

Through ten years of work, the committee has developed several measures to boost the implementation of gender mainstreaming in research. One important instrument is the website *Gender Balance in Research – Norway*.³ The website publishes news articles about national and institutional policies and discussions regarding gender equality. It also follows European debates regarding gender balance in research. Updates are collected and presented in a monthly newsletter. The website is also a resource for those who are working towards having an improved gender balance in that it gathers useful links, relevant literature, statistics and examples of best practises.

One priority activity is official visits to the top management of relevant institutions, to gather information about present gender balance at an institutional level, to give advice and to share experiences. Institutions' gender action plans and ways to improve them are discussed. The committee has annual meetings with important stakeholders in the field, such as the Minister for Education and Research and top leadership at the Research Council of Norway. In addition, the committee has established an annual network conference for gender equa-

³ eng.kifinfo.no

lity officers at research institutions, it arranges seminars and publishes reports,⁴ and it has provided funding for female researchers' networks.

In 2014, the committee's mandate was extended to include both diversity and gender perspectives in research, and the name changed to *Committee for Gender Balance and Diversity in Research*.

The US national committee, the *Committee on Women in Science, Engineering, and Medicine* (CWSEM), was established at the National Academy of Sciences in 1990.⁵ CWSEM is a standing committee of the National Research Council,⁶ and it has a mandate to coordinate, monitor and advocate actions that increase the participation of women in science, engineering and medicine. The committee collects and disseminates information on the education and employment of women scientists and engineers, and recommends ways to enhance women's advancement. Its activities include building an agenda of study projects; disseminating data on its website and at professional meetings; and serving as an information resource for the national media and as a liaison to other national organisations. Since its inception, CWSEM has published several reports and convened various national conferences and workshops.

To give some examples, the CWSEM has a programme called *Career Pathways and Advancement*. It aims to understand gender differences in recruitment, retention and advancement at critical transition points and to investigate and disseminate best practises to facilitate women's career transitions and advancement. Through the programme *Leadership*, CWSEM examines the underrepresentation of women in leadership positions and its root causes, in addition to encouraging female leaders to provide mentoring and sponsorship etc., and to liaise for institutional transformation. CWSEM participates in international efforts to promote women's participation in science, technology, engineering and medicine (STEM). To this end, the programme *Global Equality in STEM* aims to advance women around the globe and to serve as a liaison to international organisations.

The Norwegian and American committees, since they are established outside a ministry, have no direct influence on national policies. A dedicated unit within a ministry would be closer to national decision-makers. However, independent committees can function as watchdogs and mediators in relation to ministries'

4 See for instance *The Nordic region – a step closer to gender balance in research? Joint Nordic strategies and measures to promote gender balance among researchers in academia*: <http://eng.kifinfo.no/c62967/nyhet/vis.html?tid=85188>

5 It was first established as CWSE, but the committee expanded its scope in 2007 to include medicine. For more information about CWSEM, see: <http://sites.nationalacademies.org/PGA/cwsem/index.htm>

6 For more information about the National Academy of Sciences and the National Research Council, see <http://www.nasonline.org/about-nas/mission>

work and national policies, in relation to national research funding agencies and other stakeholders, and in relation to the research institutions. This was shown in an assessment of the Norwegian committee from 2012.⁷

CNRS in France (see 2.1.4) established the *Mission for the Place of Women at CNRS* (MPDF) in 2001 as the first national institutional structure dedicated to overseeing gender equality in research in France, with permanent staff, a dedicated budget and a direct link to the top management. It is a strategic and operational unit in charge of designing, implementing, coordinating and assessing actions to foster gender equality and gender mainstreaming. MPDF's four priority areas are promoting professional equality between women and men within CNRS; promoting gender research and the integration of the gender dimension in research contents; reaching out to young people, especially young women, and developing new role models; and developing partnerships in France, in Europe and around the world.

The Swiss National Science Foundation (SNSF) has defined its commitment to gender equality in a mission statement. Apart from SNSF's principles, the document sets out gender equality standards and measures for the research council and for administrative offices.⁸ Despite these measures, SNSF's progress had been slower than desired, and in 2014, it appointed a new, independent commission composed of international experts. The *Gender Equality Commission* advises the SNSF on gender equality issues and helps it to develop new strategies. It collaborates with SNSF's Gender Equality Office.

2.1.4. Gender action plans

Spain, Norway, Germany and France have legislation that requires universities and research institutions⁹ to develop gender equality plans (GAPs). In Belgium, the Flemish government asked Flemish universities to prepare GAPs following a policy plan issued in 2013, and all Flemish universities had issued their GAPs by spring 2014. In Switzerland, GAPs are not required by law, but GAPs are the main instrument in the Swiss national programmes for equal opportunities for women and men at universities (see 2.3.2). In Belgium, GAPs are a required for Flemish universities to receive funding from their main governmental research fund. In the UK, GAPs are not mandatory, but the 2010 Equality Act has introduced some duties to eliminate discrimination and promote equal opportuni-

7 The Committee for Gender Balance in Research went through an internal assessment in 2012. Every research institution and the Research Council of Norway were asked to assess its work and give advice for the future. The feedback was collected and analysed in a report (in Norwegian only) and forwarded to the Ministry of Education and Research in 2012.

8 Read the SNSF's Mission Statement on Equality between Women and Men (2008): http://www.snf.ch/SiteCollectionDocuments/wom_leitbild_gleichstellung_e.pdf

9 To be specific, in France, only universities are obliged by law to prepare GAPs, but public research institutions are obliged by the agreement *Memorandum of understanding on professional equality between women and men in the French public service*. In Germany, the law includes all public institutions, including publicly financed universities.

ties for people with “protected characteristics,” e.g. gender, sexual orientation, or age. These duties are most far reaching in Scotland, where public institutions, for instance, are obliged to set equality outcomes every four years and to report on their progress every two years. Even though differences exist between countries, an example illustrative of both positive outcomes and obstacles will prove useful. In this case, we will use Norway.

According to the Norwegian Gender Equality Act, all employers, both private and public, are obliged to promote gender equality and to prevent discrimination through active, targeted, planned work. The act relating to universities and university colleges also states that universities and university colleges have an obligation to work for gender equality. The Ministry of Education and Research requires that all universities and university colleges adopt a GAP to fulfil these legal duties. Institutions of higher education must file an annual account with the Ministry describing the current state of affairs regarding gender equality at their institution and the measures implemented and planned in order to promote gender equality and to prevent differential treatment of men and women. The institutions’ work for gender equality is a standard issue in the regular budget dialogue between the institutions and the Ministry of Education and Research. The Equality and Anti-discrimination Ombud has the authority to investigate whether institutions’ work to promote gender equality is satisfactory and in compliance with the law. However, the Ombud can neither impose any concrete measures on the institutions nor impose any sanctions if an institution does not comply with a request.

The challenge in Norway, and in other countries, is that even if research institutions are obliged to have a GAP and to report the status of gender equality and their work for gender equality, their compliance is not necessarily satisfactory. And even if there is a structure to monitor the GAPs and the institutions’ work for gender equality, there are no means to sanction them or to impose concrete measures on the institutions. The Committee for Gender Balance and Diversity in Research (see 2.1.3) visits several institutions every year, and during these visits, the institutions’ gender equality plan is always an issue. Through its website,¹⁰ the committee collects and presents the GAPs of the universities and university colleges. These reviews of the GAPs have shown that the quality of the institutions’ work for gender equality varies significantly. But they have also shown that their work has improved in recent years. This suggests that despite the lack of sanctions, both the monitoring of GAPs and the initiatives requiring institutes’ leaders to present and discuss their GAPs with experts and authorities can positively influence the institutions’ work for gender equality.

¹⁰ eng.kifinfo.no

One institution with a new and updated GAP is the National Center for Scientific Research (CNRS) in France. Even though initiatives on an institutional level are described in a separate report, CNRS is a national research centre and the largest basic research organisation in Europe. It covers all fields of knowledge and has joint labs with all French universities as well as other national disciplinary research organisations and key industrial partners. CNRS plays a strategic role in defining, funding, undertaking and evaluating national research programmes. Since its GAP hence affects a large portion of the French research sector, we have chosen to include it in this report on national-level initiatives.

The objective of CNRS’s Transformational Gender Action Plan (T-GAP) is to foster gender equality at CNRS through the implementation of a tailored and comprehensive set of measures that will create sustainable structural change in the organisation. The T-GAP has been developed partly through CNRS’s participation in the FP7-supported www.integer-tools-for-action.eu

The T-GAP consists of four key themes, with a set of key objectives within each theme and roughly 50 actions in total. It targets all categories of personnel at CNRS (over 33,000 employees). The key themes are the engagement of decision-makers; organisational structures; career progression, development and support; and work-life balance. It has been developed based on quantitative and qualitative data, national legislation and regulations, examples of good practice, feedback from peer institutions, gender studies results and feedback from implementing teams. The T-GAP began to be implemented in 2012. The Mission for the Place of Women at CNRS, responsible for proposing the T-GAP, coordinates several implementation teams, working groups, task forces and networks of contact points in regional delegations. Two CNRS academic departments, where the proportion of women is the lowest, are more specifically targeted (the Institutes of Physics and Mathematics). The CNRS Steering Committee for Gender Equality, a high-level committee comprising all key top-level decision-makers at CNRS, oversees the T-GAP’s implementation.

A first evaluation round of the T-GAP’s implementation has been carried out by German CEWS-GESIS. The final report will be ready by the end of June 2015.

At this stage, most actions have started to be implemented and several have started producing results (e.g. cultural change and building capacity through gender training; 4:6 gender ratio on CNRS board of trustees; better gender balance on key committees and in key positions, such as CNRS regional delegations; better gender balance in CNRS awards (CNRS Medals); change of policies/practices; etc.). As part of INTEGER, CNRS will be producing guidelines for GAP implementation and a toolkit for evaluation, based on lessons learned, to help peer institutions engage in structural change.

2.1.5. Gender equality units/ officers and networks

Some countries require that their research institutions have a dedicated gender equality unit or officers. Since the introduction of the Fioraso Law, French universities have to establish a unit to work for gender equality and to implement their gender equality plans. These units are also responsible for producing gender statistics so that they can monitor and evaluate the progress of gender policies within the institutions.¹¹

In Germany, all public institutions, including universities, are required by law to appoint or elect an equal opportunities officer, who usually has to be a woman, but could also be a man—depending on the law of the federal state. She/he is usually independent from the directorate and should ensure that equal opportunities laws are respected and followed, i.e. she/he is bound only by the equal opportunities laws and not, for example, by the goals and strategies of the university. She/he usually has a seat in most panels and committees and is part of decision-making processes, with veto rights in recruitment processes.¹² The equal opportunities officer is also responsible for developing a gender action plan that shows the distribution of women on the different hierarchic levels of the institution and suggests how the university can overcome potential imbalances. Her position is protected by law, and she cannot be dismissed before the end of the elected period.

In Germany, equal opportunities officers at universities and institutions of applied sciences cooperate through the network *Federal Conference of Equal Opportunities Officers*. In addition to combining forces and sharing best practices, this network undertakes political work to increase gender equality in research (through conferences and meetings, releasing statements, cooperation with national and regional ministries to implement action programmes, and administering some of these programmes). There are regional conferences in all 16 German states. In our assessment, Germany reported that the network has been fruitful for the development of national gender equality policies. The Federal Ministry for Higher Education often collaborates with the network to benefit from their expertise.

A similar network exists in France since 2011, the *Conférence Permanente des chargé-e-s de mission Egalité Diversité des établissements d'enseignement supéri-*

¹¹ The statistics are gendered in the biennial report of the National Strategy for Higher Education and the National Strategy for Research, both drafted by the ministry. Furthermore, the Ministry Roadmap—which contains specific actions helping institutions to implement the law and to assess their success in doing so—has included the setting up of a barometer of equality that each institution can use to self-audit gender balance and that the ministry will use to monitor progress as well. But several sections still have to be published and the Ministry is having working groups with institutions to complete and finalise the barometer. (April 2014)

¹² Since it can be hard for one person to attend all committee and panel meetings, some universities have several proxies who can step in, e.g. in Freiburg; each faculty has their own equal opportunities representative who can act for the equal opportunities officer

2.1.6. National gender equality plans

eur et de recherche (CPED)¹³, which today gathers 66 members and has proven instrumental in advancing the agenda at national level.

In Spain, all universities are required by law to have an equality unit. This unit is responsible for drafting and monitoring each university's gender equality plan in collaboration with other units at the university. Further, the Law of Universities establishes that every public university must have a Gender Equality Unit. As required by the National Strategic Plan for Equal Opportunities, a network between the equality units of all universities has been created, with support from the Institute for Women. The *Network of Gender Equality Units for Excellence in University* (RUIGEU) consists of 42 Spanish public universities' equality units. The aim is to facilitate cooperation and hence to leverage the efforts and optimise the resources of the different units, research groups and individuals working for gender equality in Spanish universities. The network facilitates the exchange of information and best practices. It is also used to advance a common policy agenda vis-à-vis the ministries and other offices.

Switzerland has official coordination bodies as well as networks for gender equality officers. From January 2015, they are all united by a delegation of equal opportunities at the rectors conference *swissuniversities*. *Swissuniversities* works to strengthen and enhance collaboration and promote a common voice among Swiss institutions of higher education.¹⁴

Some of the assessed countries have reported having national strategies or plans adopted by research councils or ministries to promote gender equality in research.

The *Irish Research Council* has adopted its *Gender Strategy and Action Plan 2013–2020*. They concentrate on three areas: supporting gender equality in researcher careers; integration of sex/gender analysis in research content;¹⁵ and internal gender proofing. Regarding gender equality in researcher careers, the council will e.g. continue to support the development and rollout of national initiatives on the subject, raise awareness about its gender strategy and action plan among potential applicants, and work to improve the gender balance among researchers submitting applications in all research fields. Regarding internal gender proofing, the council will e.g. carry out an assessment of existing policies and processes in relation to gender equality in research careers and the integration of sex/gender analyses in research content; implement training measures to enhance competence within the council; introduce gender-proof

¹³ <http://www.unistra.fr/index.php?id=cped&L=3>

¹⁴ For more information, see: <http://www.swissuniversities.ch/en/organisation>

¹⁵ Initiatives on integrating sex/gender analysis in research content are described in the GENDER-NET report on national and regional initiatives for the integration of the gender dimension in research contents

criteria for assessment processes; aim for balance on boards and committees, and in groups and workshops; produce sex-disaggregated statistics; and monitor/analyse patterns of awards.

The *Research Council of Norway* is a national strategic and funding agency for research activities. The Council serves as the Norwegian Government's chief source of advice on research policy, as well as supplying advice to government administration and the research community. For many years, the Council has taken active steps to promote gender equality in research, gender perspectives in research and fundamental knowledge about gender. In its most recent policy on *Gender Balance and Gender Perspectives in Research and Innovation* (2013–2017),¹⁶ the Council strengthened these efforts by setting more specific, verifiable objectives in three ways: by assuming a greater national responsibility for equality, by working more systematically within the administration of research funding and by strengthening the knowledge base for use in research and innovation policy. The Research Council seeks to be a driving force in these areas, both nationally and internationally.

The *French Roadmap for Equality between Women and Men* at the Ministry for Higher Education and Research was launched in 2013, with most actions continuing into 2014. In addition to the actions described in chapter 2.1.2, the ministry, through its Equal Opportunities and Anti-Discrimination Office (MENESR), plan to e.g. train Human Resources (HR) personnel about gender equality, train future teachers about gender equality and work to mainstream gender. Charters on equality have been signed with higher education and research (HER) institutions. Further, gender will be integrated into contracts between the ministry and stakeholders, gender will be integrated into reports on HER strategies and gender-disaggregated statistics will be compiled. Other goals are e.g. to strengthen French participation in relevant European fora and to fight gender violence and gender-related stereotypes in science (e.g. through the Irene Joliot-Curie Award).

Spain's National Strategic Plan for Equal Opportunities (2014–2016) includes several measures specifically targeting the research sector. Some are devoted to gender mainstreaming, e.g. opening communication lines between the ministry and the Board of Rectors at Spanish Universities and monitoring achievements. Some are devoted to increasing women's participation, e.g. requesting measures to strengthen equal treatment in the selection and evaluation of research staff and in procedures for granting research funding. Some are devoted to improving the funding and evaluation of gender studies projects. Yet others are devoted to improving sex-disaggregated public statistics on science, technology and innovation and to strengthening the integration of the gender dimension in the *Spanish Strategy for Science, Technology and Innovation*. The

¹⁶ The policy is available (as a PDF) at: <http://bit.ly/1BFZ7BF>

Spanish Strategy for Science, Technology and Innovation (2013–2020) states that gender perspective should be incorporated into all public policies related to research, development and innovation to correct the loss of human capital due to the lack of gender equality in research.

In 1999, the Parliament of Switzerland adopted the Beijing Platform of Action and endorsed its *National Action Plan for Equality between Women and Men*. It included 287 measures covering 13 areas of intervention. "Ensuring equality between women and men in education" was one of these areas. Hence, since 2000, Swiss universities and universities of applied sciences started to implement strategies and policies to promote gender equality and ensure equal opportunities. Switzerland has adopted *national gender equality plans*—one for universities of applied sciences and one for universities—that form the basis for their *two federal programmes for equal opportunity for women and men* (one for universities and one for universities of applied sciences). The programmes are described in chapter 2.3.2.

2.1.7. Sex-disaggregated statistics

Developing and improving gender-disaggregated statistics has priority in many countries (see 2.1). The European She Figures reports¹⁷ have raised awareness of the importance of having gender-disaggregated statistics and indicators. All the assessed countries from Europe have been included in She Figures since it was first published in 2003. Data collection is undertaken every three years by the Directorate-General for Research and Innovation of the European Commission, in cooperation with the Helsinki Group and its sub-group of Statistical Correspondents.

Spain's Equality Law of 2007 states that government bodies must ensure that sex is included as a variable in their statistics, surveys and data collection. They must include indicators that enable a better understanding of e.g. the differences in values, roles and conditions that exist between the genders, and indicators to detect multiple discrimination. Statistical definitions should contribute to the recognition of women's work and avoid negative stereotyping. The Law of Science, Technology and Innovation and the Law of Universities supplement this law, and state e.g. that the Information System on Science, Technology and Innovation must collect, process and disseminate sex-disaggregated data and indicators, and that there will be reports about the progress and impact of the work for gender equality in universities.

Hence, since 2007, MINECO¹⁸ has regularly published the report *Científicas en Cifras* ("Female scientists in numbers"). The report aims to review the situation of women in research in Spain.

¹⁷ The last report, *She Figures 2012: Gender in Research and Innovation*, is available at: http://ec.europa.eu/research/science-society/document_library/pdf_06/she-figures-2012_en.pdf

¹⁸ The Unit of Women in Science at the Secretary of State of Science, Development and Innovation, Ministry of Economy and Competitiveness. See 2.1.2

In France, the Fioraso Law renders compulsory the inclusion of sex-disaggregated data in the biennial reports on the national strategies for higher education and for research presented to the French Parliament. All public employers are requested to include a specific set of 27 sex-disaggregated indicators in their annual social reports.¹⁹ CNRS has been a pioneer at national level with its comprehensive “parity booklet” (2008), published as a complement to its annual report.

2.1.8. Equal pay

Addressing pay differences is a key requirement of UK equality legislation. Public sector equality legislation in Wales and Scotland also requires higher education institutions to set objectives or equality outcomes to tackle pay inequalities. Analyses of the gender pay gap are provided in the Equality Challenge Unit’s annual statistical report and through institutional equal-pay reviews.

The Federal Office for Gender Equality (FOGE) in Switzerland provides information to employees and employers and ensures that equal pay is offered in the federal administration’s procurement system. They also provide training with experts and tools for measuring whether companies have equal pay.²⁰

In a survey among members of the Helsinki Group on Gender in Research and Innovation (2013), Anke Lipinsky discussed how the expansion of institutional autonomies, flexible means of remuneration, including endowments, flexible bonuses and other benefits could influence gender pay gap in research. Only Austria, Cyprus and Finland implement integrated and active policies to monitor and rectify pay gaps in the research sector.²¹

Some countries have introduced gender budgeting, which is the implementation of gender mainstreaming in the budgetary process. There are however, no such examples in our material.

2.2. Anchoring gender equality issues at leadership level

2.2.1. Introduction

The focus in this chapter is on initiatives that are solely aimed at anchoring gender equality measures and policies at leadership level. Leadership commitment and involvement is vital for ensuring success. Leaders who take responsibility for developing policies and implementing measures have the power and opportunity to achieve substantial, long-lasting and robust changes. In addition to being valuable role models, devoted top leaders help to make gender equa-

¹⁹ For more information, see:
<http://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000028388107&dateTexte=&categorieLien=id>

²⁰ For more information, see:
<http://www.ebg.admin.ch/themen/00008/00072/index.html?lang=en>

²¹ Gender Equality Policies in Public Research : Based on a survey among Members of the Helsinki Group on Gender in Research and Innovation, 2013

lity a mainstream consideration during the general decision-making processes at the institution. If they make gender equality an issue in meetings with lower-level managers and ask for results on agreed initiatives, these managers will know that implementing gender equality policies and measures are of importance to the management, and hence should be prioritised. Devoted lower-level managers are important because they have operational responsibility. Without leaders that take responsibility for prioritising and mainstreaming gender equality, the work for gender equality is vulnerable and depends solely upon devoted individuals. This makes it hard to achieve lasting change.

According to our material, there are only a few initiatives exclusively aimed at leaders. These can roughly be divided into two categories, which we have described below: *top-level leadership committees for gender equality* and *training on gender equality for leaders*. These initiatives have been developed recently, or are still under development.

2.2.2. Top-level leadership committees

France has reported having leadership committees of two kinds. One is the *Committee for equality* (COMEGAL), established by the Ministry of Higher Education and Research in 2011. This committee was established to make top-level higher education and research leaders more committed and to make them contribute to the advancement of national measures to promote gender equality. COMEGAL intends to meet twice a year in a short plenary session organised by the Equal Opportunities Office at the ministry, which is led by the minister and/or her/his cabinet. The fact that the cabinet/minister hosts and leads the meetings is supposed to ensure that only high-level representatives of HER institutions will come. A select group of institutions have been chosen to nominate one man and one woman to represent them at the meetings: the Rectors’ Conference, the Engineering Schools’ Conference, the Higher Education Schools (Grandes Ecoles), CNRS, IRD, INSERM (research institutions with specific research fields), the National Funding Agency, the Evaluation Agency, the Academy of Sciences, and the three Directors General (for Research and Innovation, Higher Education, and Human Resources).

The meetings are forum for presenting tools that the ministry wants to discuss with HER stakeholders, such as obstacles and difficulties the institutions encounter when implementing gender action plans and other initiatives, or for the ministry to raise awareness of specific deadlines and expectations.

The other French top-level committee is the *Steering Committee for Gender Equality* at CNRS. It was initiated in 2011 with an aim of making sure that gender equality issues are anchored at the top levels of leadership and successfully mainstreamed within all policies, practices and programmes. It reviews proposals made by the Mission for the Place of Women at CNRS (see 2.1.2) and monitors progress on the implementation of the CNRS Transformational Gen-

der Action Plan (see 2.1.5). The Steering Committee consists of all key top-level decision-makers at CNRS and is chaired by the President. It met for the first time in 2013, to validate the T-GAP proposed by the Mission for the Place of Women and has met twice since.

Such high-level committees can be valuable tools to make gender issues more visible and to raise awareness of leaders' responsibilities. It is also a way of making leaders more committed to gender equality. Committed leaders help to increase the legitimacy of gender equality measures and policies and the relevance of gender equality for improving research quality. The implementation of institutions' gender action plans is an important part of the agenda for both COMEGAL and the Steering Committee for Gender Equality.

2.2.3. Training on gender equality

Here, we use the term training as this was the term used by most of the respondents in our material. Another term in use is capacity building seminars. Training in this material is built upon relevant recent research. The *"Acting for Gender Equality at CNRS" Training* was established in 2011 to raise awareness and knowledge of gender equality and social stereotypes among decision-makers at different levels. External experts are invited to contribute to sessions, according to the target population. According to CNRS, these training sessions have resulted in new "change agents" who have developed ownership of different actions across the organisation, and gender equality contact points are now being established in each CNRS regional delegation. The training has contributed to a raised awareness among participants, and they speed up the implementation of measures within each participant's area of responsibility. All in all, the training has initiated several processes and seems to be leading to gender mainstreaming. CNRS has now decided to widen the audience to include all CNRS staff through a communication campaign on their T-GAP and through e-learning modules.

In Switzerland, there is a development scheme where incoming young professors get training on gender equality and gender awareness in parallel with training for leadership. The scheme is called People and Financial Management Training. So far, this is only offered at the University of Bern, but according to CRUS,²² it will be transferred to other universities soon. As with the CNRS's training, the Swiss training is likely to raise participants' awareness of gender issues.

A common challenge with regard to leadership anchoring is how to include lower-level management. Top-level leaders seldom have operational responsibility; hence, gender equality issues and measures also need to be anchored at the level which holds this responsibility. The gender equality training at CNRS addresses this challenge since it includes leadership at all levels. One could also argue that the Swiss training scheme addresses this challenge, since leadership

²² The Rectors' Conference of the Swiss Universities, which is the unit responsible for running the Swiss federal programme for equal opportunity for women and men at universities

training includes all incoming young professors. In the course of their careers, the different participants are likely to sit in different leadership positions, at different levels and within different areas of responsibility. It would be interesting to see whether Switzerland will register some of the same experiences as CNRS has reported from their first years having a training programme.

In Spain, the Ministry of Health, Social Services and Equality has an annual call for funding gender training, information and awareness-raising actions at universities. It can be used for decision-makers' gender training on specific topics, but can also be allocated to other university sectors, including students. Spain also has a *national training programme in equal opportunities*, as required by its Equality Law. It has been conducted annually since 2009 and consists of courses in various areas (e.g. health, gender-based violence, education, legal and judicial frameworks), targeted at different personnel in the public and private sectors, including the research sector. The programme is composed of online courses, classroom-based courses, seminars, conferences and other related activities. The Women's Institute at the Ministry of Health, Social Services and Equality has designed the programme and its courses, and collaborates with various agencies and institutions, both public and private (e.g. Regional Official Institutions, Equality Bodies, Health Services of the regional governments, the Red Cross Organisation). Finally, Spain's *Public Research Institutions* are required by the Equality Law to include courses on gender and equality in the training programmes for their personnel. According to the Law of Science, Technology and Innovation, these programmes must include the topic "gender and science." The Spanish training programmes on gender equality are not specifically targeted at leaders; they are targeted at various, if not all, personnel.

2.2.4. Other initiatives

The CNRS has decided to include two gender equality indicators amongst the 45 key performance indicators of the CNRS President's balanced scoreboard. The scoreboard will be functional in early 2015 and will serve as an internal institutional monitoring tool, to monitor CNRS's monthly progress towards its set goals. In this way, gender equality will be an integral part of the organisation's general assessment and monitoring efforts, as well as providing information leaders and managers will have to take into consideration.

2.3. Recruitment, retention and advancement of women researchers, including leading positions

2.3.1. Introduction

This chapter describes many large-scale initiatives to promote women's careers in research. Many of the countries involved included their main gender equality initiatives here. Roughly, the initiatives fall into two categories, which are described below: *measures to promote women in research through improving the*

institutions' gender equality work and measures that are targeted at the individual women researchers. When it comes to promoting gender equality in research, there has been a recent shift from a focus on “fixing the women” to “fixing the institutions,” and this is reflected in our material. Most initiatives focusing on institutional change are relatively new, and the Swiss federal programme, which has been running since 2000, changed its structure from 2013 to promote institutional change. Common features of these initiatives are that they require both research institutions' self-assessment and their development of internal gender action plan, in which they identify their own challenges and outline measures to combat these. They focus both on numbers and on practices/structures/policies, and they require leadership involvement. Most of them are connected to funding of some kind.

Although there exists a focus on “fixing the institutions,” there are also several initiatives aimed at individual researchers, such as training, mentoring, networks and rewards systems.

2.3.2. Measures to improve the institutions' gender equality work

Since 2000, Switzerland has had *two federal programmes for equal opportunity for women and men: one for universities and one for universities of applied sciences (UAS).*²³ They can serve as an example of a shift towards focusing on “fixing the institutions” and structural change. The programmes are quite similar, and the overall goal is the same: elimination of horizontal and vertical segregation. The programme for universities is run by the Rectors' Conference of the Swiss Universities (CRUS), and the programme for the UAS is run by the State Secretariat for Education, Research and Innovation (SERI). They are similar in terms of both their organisation and their procedures for application and reporting, but they are slightly different when it comes to their specific areas of action. The two programmes are now in their fourth period (2013–2016), and both programmes changed their approach completely before this period started. Until the end of the third period, the programme for universities consisted of three modules, with a goal that 25% of full professors be female and that 40% of assistant professors be female:

1. An incentive programme for the promotion of female professors.
2. A mentoring programme for the promotion of female junior researchers.
3. A work-life programme for greater balance between academic career and family, including dual careers (see 2.4).

After the third period, the programme went through an expert evaluation that, despite underscoring major achievements, recommended a new approach for

²³ The programmes were a consequence of Switzerland's adoption of the Beijing Platform of Action and the endorsement of its National Action Plan for Equality between Women and Men in 1999

the fourth period. One of the arguments for such a change was that gender equality work needed to be better integrated into the individual institutions' strategies and plans and ought to be less dependent of the federal programme as a third-party fund. Hence, a new approach was launched. For the years 2013–16, the federal government only provides funding for gender equality work carried out as part of institutions' individual gender action plans. The institutions supplement federal funds with their own funding (normally 50%). The goal is still that 25% of full professors be female and that 40% of assistant professors be female. In addition, the proportion of women in leading academic positions and management bodies at universities and related institutions should be increased.

The programme for the universities of applied sciences went through a similar process and change. Both programmes require that the institutions submit individual gender equality plan aiming to ensure an institutionalised top-down gender equality policy. Regular monitoring should be introduced. The action plans must include a gap analysis and goals based on this analysis. Even though the institutions can decide which specific measures to implement, they have to address certain topics: how to anchor gender equality at the institution; gender-sensitive measures in the promotion and recruitment of students, junior academics, professors and managers; measures to ensure family friendliness; human resources initiatives; and measures to reduce horizontal and vertical segregation, especially in STEM/MINT subjects (mathematics, informatics, natural sciences and technology).

All the action plans are submitted and signed by a responsible university leader (chancellor or vice-chancellor) and the gender equality delegate. This delegate is usually situated at university management level within the institution. This helps ensure anchoring of gender equality issues at the top level of leadership and top-down pressure to improve gender equality work. An annual report on the action plan is sent to CRUS/SERI, and an evaluation by an external specialist is carried every four years. Institutions also have to submit a final report at the end of the current period.

In sum, the programmes' approach has been changed to anchor gender equality work at leadership level and to integrate it into the institutions' individual strategies, plans and processes. It will be interesting to see whether this will lead to a higher level of structural change.

The United Kingdom has two well-established award schemes in which self-assessment; gender equality plans and the gender equality progress are the main criteria for evaluation: the *Equality Challenge Unit's Athena SWAN Charter* to advance the representation of women in science, technology, engineering, medicine and mathematics (STEMM) and the *Institute of Physics' Project Juno* for

physics departments in the UK. Now under trial is the Equality Challenge Unit's *Gender Equality Charter Mark*, which is based on what was learned through Athena SWAN and aims to advance the careers of women in the arts, the humanities, the social sciences, law and business. They are also developing the *Equality Challenge Unit Race Equality Charter Mark*, which aims to improve the recruitment, retention and success of black and minority ethnic academics. This includes minority ethnic female academics, and the intersection between race/ethnicity and gender will be considered. Athena SWAN and Project Juno are thoroughly described in the GENDER-NET report on award schemes, so they will not be further described in this report.

Germany's *Programme for Women Professors* works through the mechanism of competition for funding of gender-specific professorships, based on universities' gender action plans and gender work. In the event of a positive appraisal of their equality policies (measures already undertaken and planned), universities and advanced technical and arts colleges have the opportunity to receive funding for up to three tenure-track positions for women. The Federal Ministry of Education and Research together with the German states (Länder) started the programme in 2007. The continuation of the programme was agreed upon in 2012 after an evaluation; it will run through 2017.

The first five years of each contract are financed with up to 150,000 Euros per year, which makes this a strong economic incentive for the universities to develop convincing gender equality plans and to implement gender equality measures so that they can receive funding. Almost two thirds of all public German institutions of higher education submitted their gender action plans for appraisal during the first programme (2008–2012)—four fifths of those with success—and 260 positions were financed. Today, one in five professorships is occupied by women, up from one in ten in 2000. The evaluation showed that the applications of female researchers gained more attention and that female professors were actively recruited in order to receive the funding. It also showed that the universities are usually more successful at hiring female professors if they offer dual-career assistance. It is, however, a large and expensive programme.²⁴

The German Research Foundation (DFG) has established *Research-Oriented Standards on Gender Equality*. The standards are meant to raise awareness of gender equality issues at leadership levels and to raise the number of women at various academic career levels, especially at the level of professor. The DFG has developed an online *Toolbox for the DFG's Research-Oriented Standards on Gender Equality* to support the institutions' efforts. It contains practical examples of

24 More information on the Programme for Women Professors:
<https://www.bmbf.de/de/das-professorinnenprogramm-236.html>
The evaluation report as a PDF:
http://www.hof.uni-halle.de/dateien/ab_6_2012.pdf

equal opportunity measures in the university context. The database is intended to support academic staff, university personnel and equal opportunity officers in developing and implementing equal opportunity measures.

The Gender Equality Standards are a self-commitment of DFG's members (mainly, the big universities). Between 2010 and 2013, they all had to report on gender equality measures, set targets for the participation of women at different academic stages and comment on their progress. These reports were evaluated by the DFG. The evaluation score was taken into consideration when the universities applied for DFG funding. The DFG standards have reached high recognition in German academic and research milieus as well as in the German political sphere.

In Norway in 2003, the Research Council of Norway launched the Centres of Excellence (SFF) scheme. The objective was to strengthen Norwegian research by developing specialist research groups of high international quality. All of the centres ended up with male directors, and male researchers dominated the junior and senior levels as well. When a new group of centres was established five years later, emphasis was placed on gender balance in the grant applications, and applicants were requested to give a detailed description of how they would work to recruit women and promote female researchers' career development. An earmarked sum was set aside to encourage the centres to implement active measures. The impact was pronounced. The proportion of female research fellows increased from 35% for the first group of centres to 53% at the new centres. At the post-doctoral level, the proportion rose from 27% to 44%, and among senior-level researchers, it increased from 17% to 23%. This policy continued in the third call in 2013. The share of women senior researchers has now risen to 33%.

The experience and good results of the SFF inspired another excellence scheme run by the Research Council: the Centres for Research-Based Innovation (SFI). The purpose of this scheme is to build and strengthen Norwegian research groups that work in close collaboration with innovative industry and public enterprise partners. In Norway, technology and industry are areas where men traditionally dominate.

After the first SFI call in 2005, the number of women involved was extremely low. Only one out of 21 centres was headed by a woman. In the last call in 2013, similar initiatives to those successfully implemented by the SFF were introduced. The call text required that gender equality should be an integral part of the application and the centre's recruitment plans, and the importance of better gender balance was actively communicated at site visits. This showed to be effective: 42 % of the applications had a woman on top, and 6 out of the

17 new centres established in the autumn of 2014 were led by a woman, which represents a fivefold increase.

In Spain, the ministry has a program to promote excellence in research within all academic fields. Selected centres are accredited as “*Centro o Unidad de Excelencia Severo Ochoa*” (centres of excellence) for a four-year period during which they each receive one million euros in annual funding. The 2013 call for proposals introduced two gender equality measures: firstly, having a gender equality plan in place that focussed in particular on recruitment and promotion will be acknowledged with a certain number of points in the evaluation rating process; secondly, the academic committees for the selection and evaluation of candidates must seek a balanced representation of women and men.

In Belgium in 2013, the Flemish government introduced the *Diversity Parameter* in its Special Research Fund, which is the main funding source for the five universities in Flanders. The Diversity Parameter determines the distribution of some public funds between the universities. (In 2013, it was 3% of the total Special Research Fund’s attribution, and in 2014–2016, it is 2%.) The number of female researchers at postdoc level and in tenure track positions determines how much money each university gets. The goal is to increase the number of women in grade A positions within all fields.

At the same time, a priority rule has been introduced in the Special Research Fund; this means that whenever new researchers are recruited to carry out research within the framework of the Special Research Fund, priority will be given to the female candidate when a male and a female candidate are equally qualified. This rule will apply until a 4:6 ratio is reached in each academic field. The priority rule must be stated in the call for candidates.

One condition for the universities to receive funding from the Special Research Fund is that they have a multiannual policy strategy that includes a chapter on how they aim to increase the participation of women and of researchers with an immigrant background. As a consequence, all five universities now have a gender action plan.

Finally, the Flemish government has decided that there should be a balanced representation of both sexes on the committee that hold responsibility for the distribution of research funds to the universities in Flanders.

In sum, the Flemish government has introduced a combination of requirements and economic incentives that can complement each other in achieving more gender balance. To get any funding from the Special Research Fund, universities are obliged to have a general action plan and to follow the priority rule for women. In addition, the Diversity Parameter works as an incentive to raise

the number of women at postdoc level and in tenure track positions, thereby determining which institutions receive the most funding.

Since 2001, the National Science Foundation (NSF) in the US has been running the programme *ADVANCE: Increasing the Participation and Advancement of Women in Academic Science and Engineering Careers*. The goals of the ADVANCE programme are to develop systemic approaches to increase the representation and advancement of women in academic STEM careers, to develop innovative and sustainable ways to promote gender equity in the STEM academic workforce and to contribute to the development of a more diverse science and engineering workforce. ADVANCE also has a goal to contribute to the general knowledge base on gender equity in the STEM disciplines. To fulfil the goals, there are currently three tracks:

- The Institutional Transformation track is meant to fund the production of large-scale comprehensive change and serve as a locus for research on gender equity and institutional transformation. It comprises 5-year grants of approximately \$3–4 million.
- The Institutional Transformation Catalyst track is meant to fund either to conduct self-assessment or to implement unique strategies and evaluate their effectiveness. It comprises 3-year grants of approximately \$200,000.
- The Partnerships for Learning and Adaptation Networks track is meant to provide a larger scale environment for adapting, implementing and creating knowledge about the effectiveness of a particular strategy for change within a context of networked adaptation and learning, either within particular STEM disciplines or across institutions of higher education.

The Institutional Transformation awards are designed to be flexible and are tailored to address institution-specific needs. The awards are used for self-evaluation, to identify needs and to examine institutional policies, practices and procedures that impact hiring, retaining and promoting women in the STEM fields.

Each grantee must publish results, and over 120 peer-reviewed papers have been produced since ADVANCE began in 2001. NSF has seen changes in policy at academic institutions, including the implementation of more family-friendly policies, as well as an increase in the number of women hired in STEM in academia and improvements in measured „climate“ (attitudes about work) at academic institutions. The model for Institutional Transformation will be used by other NSF programmes that target broadening participation and workforce development²⁵.

25 For more information about ADVANCE, see:
and <http://www.nsf.gov/crssprgm/advance>
<http://www.portal.advance.vt.edu>
For the ADVANCE Implementation Mentors Network, see <http://advanceaimnetwork.org>

The Research Council of Norway has established a somewhat similar programme—the *Programme on Gender Balance in Senior Positions and Research Management (BALANSE)*²⁶,—which is to run for a minimum of five years (2013-2017). It is a policy-oriented programme aimed to improve the gender balance at the senior level in Norwegian research through new knowledge, learning and innovative measures. The programme will support efforts to bring about cultural and structural change, and provide. It will serve as a national learning arena and develop a gender equality toolkit for use within the sector. This will be achieved through three main areas of activity:

- Funding of BALANSE projects to promote research institutions' efforts to improve gender balance through a systematic, strategic approach. The applicant institution must provide a good analysis of what it believes to be the institution's main structural and cultural challenges. It must show how the project will address these challenges through the development of new initiatives and strengthening of established measures. The project must support systematic career development for women at levels near professor, senior researcher and/or research director and may incorporate individual measures such as research sabbaticals, support for mobility, funding for day-to-day operations, training and experience in project management, and leadership development. The projects should involve documentation and analysis, and include a plan for knowledge dissemination, sharing and evaluation.
- Funding of knowledge development and new research on the underlying structural and cultural processes that promote or obstruct gender balance in research. Of special interest is research on the trade and industry sectors, and systematic knowledge about the significance of various management strategies and the impact of measures. The aim is to integrate the results into the knowledge base for use in research and innovation policy.
- The BALANSE programme will establish a national learning arena at the programme level with two main target groups: leaders in the research sector and participants in the projects. There will be gatherings for sharing knowledge and experience, raising awareness, building networks and providing information. Some measures will be targeted specifically towards one of the target groups, while some events will include both groups and be open to other interested parties.

A key objective is to raise the awareness of research managers about their role in recognising, developing and recruiting talented female researchers. The programme aims to increase the share of women researchers in senior positions,

²⁶ For more information: www.rcn.no/balanse

to identify new and innovative measures for gender equality and to develop knowledge about which measures prove to have most impact on gender equality.

In spite of their differences, both ADVANCE and BALANSE combine three different instruments: to develop more knowledge of how to achieve institutional change; to fund projects in which institutions identify their challenges, launch measures to combat these and analyse their results; and platforms/networks for cooperation, knowledge development and knowledge sharing.

The CNRS in France established a programme called *STRIDE-like Committee* in 2013, inspired by the University of Michigan's STRIDE Committee (Strategies and Tactics for Recruiting to Improve Diversity and Excellence) created through the NSF ADVANCE programme). The Committee reviews procedures and practices for the evaluation of CNRS researchers—taking into account the effects of gender schemas, lack of critical mass and induced implicit bias, as well as family-related issues—in order to propose concrete measures that will favour gender equality and gender balance in the recruitment, promotion and academic recognition of researchers at CNRS. It seeks a deeper understanding of issues at stake, through the examination of gender research studies in the social sciences and cognitive psychology, amongst other fields, and has invited several researchers to present their findings. Members include key decision-makers in the researchers' evaluation process at CNRS, as well as senior women researchers and gender researchers. Examples of measures proposed by the committee include

- Training all members of evaluation panels and institutes' decision-makers about gender equality issues and gender stereotypes and providing comprehensive sex-disaggregated data before recruitment and promotion campaigns;
- Taking into consideration family-related career breaks and part-time work in evaluations and changing application forms accordingly; and
- Asking CNRS laboratory directors to propose both male and female researchers' names to evaluation panels for scientific awards (CNRS Silver and Bronze Medals, in particular).

In the UK, the programme *Vitae: realising the potential of researchers* has existed since 2008. It is managed by the not-for-profit registered charity CRAC and supported by Research Councils UK and UK HE funding bodies. Vitae's goal is to improve career development and working conditions for researchers in higher education, working in partnership with higher education institutions, policy makers, stakeholders, employers and individual researchers. It develops policy and practices to effect change by providing online information, advice and resources regarding professional development and careers for higher education institutions and researchers. The programme has supported the implementation of the UK's Concordat to Support the Career Development of

Researchers. It also established a process for UK institutions to gain the European Commission's HR Excellence in Research Award. By early 2014, 72 UK organisations had received the award. Even though gendered career challenges are not particularly addressed by the programme, women researchers clearly gain from these initiatives to improve all researchers' career development and working conditions.²⁷

The UK Research Councils (RCUK) have also laid out common requirements for the support of all Research Council PhD students through the Statement of Expectations for Doctoral Training. These principles ensure that all students become exposed to industry and other relevant employment sectors, international networking and experiences outside the "home" research organisation, and transferable skills training, to prepare PhD students for a possible career outside academia. As a result, both female and male PhD students obtain valuable skills and experiences that can have a positive career impact.

Germany also has programmes at state level. One example is the *Mathilde Planck Programme* of the State Baden-Württemberg (there are similar programmes in other German states). It aims to support gender equality between women and men at Universities of applied science, to enhance the presence of women in professorships at these institutions and to create networks between the participants and the universities. The programme started in 1997 and finances teaching assignments which are newly awarded to women.²⁸ It is accompanied by a mentoring programme. According to the evaluation by the State Conference of Equal Opportunities Officers of Baden-Württemberg, which administers the programme, it fosters awareness of gender issues at higher education institutions and raises the percentage of women professors. As of February 2014, a total of 230 participants have successfully applied for a professorship. German Universities of applied science request some working experience in the industries. As very few women hold grade A positions in those fields, there are few female applicants for professorships. As the Mathilde Planck Programme applications of female researchers gained more attention, female professors were actively recruited. Although this is an expensive programme, the evaluation showed that it had a heavy impact on the percentage of female professors.²⁹

²⁷ For more information about Vitae, see <https://www.vitae.ac.uk>

²⁸ The programme is financed by the State Ministry of Education and Research of Baden-Württemberg and administrated by the State Conference of Equal Opportunities Officers of Baden-Württemberg

²⁹ For more information on the Mathilde Planck Programme, see: <http://www.gleichstellung-interim.webseiten.cc/angebote-fuer-hochschulen/foerder-programme/mathilde-planck-lehrauftragsprogramm.html>

2.3.3. Measures aimed at individual women researchers

The *UK Leadership Foundation for Higher Education's Aurora Programme* is a women-only leadership development initiative that was launched in November 2013. It aims to enable women to think of themselves as future leaders, to develop the skills they will need and to help their institutions to maximise the use of the skills they acquire. Aurora takes a partnership approach with universities and colleges; they make a commitment to provide mentors and role models as well as participants so that leadership progression for women is recognised more widely across the institutions.³⁰ Even though it is a UK programme, Trinity College Dublin, in Ireland, also participates.

The new *SFI Advance Award Programme 2014–Women in Science* in Ireland is designed to provide female postdoctoral researchers with an opportunity to remain in, or return to, high-quality research and, in particular, to undertake further training that has substantial industry relevance. It allows a flexible time commitment by the researcher and thus can be carried out on a full- or part-time basis. The award is suitable for women wishing to return to research after a break owing to family commitments, although this is not a mandatory criterion. An interested candidate should identify an academic mentor, who will apply to SFI to host her within his/her team and research facilities. It is expected that the Advance Award researcher will collaborate closely with at least one of the academic mentor's industry partners during her training to ensure relevance to several possible career paths, i.e. STEM employment in industry or in the public sector.

The CNRS Transformation Gender Action Plan (see 2.1.3) includes *national professional development training sessions* on careers and so-called self-censorship ("Springboard" programme adapted to French academia and CNRS environment from the UK model). The training programme for junior women researchers and female junior professors started in 2013, and it has also led to the creation of women researchers' networks. In addition, the T-GAP includes national outreach activities towards female PhD/master's/high school students, developed together with partner national associations, such as *Femmes et Mathématiques* and the *Commission Femmes* of the French Physical Society.

In the UK, the *Black Sister Network* was established as a part of Black British Academics in 2013. The aims of the Black Sister Network are to acknowledge the intersection between gender and race/ethnicity and to build solidarity and engage in collective activism; to develop collective strategies to address inter-sectional inequalities; to develop interdisciplinary research regarding race and

³⁰ For more information on the Aurora Programme, see:

<http://www.lfhe.ac.uk/en/programmes-events/you/aurora>

An evaluation of the programme's first year can be downloaded from the Aurora programme's website:

<http://www.lfhe.ac.uk/download.cfm/docid/73493F92-989A-45E1-B3570121619BFA0F>

gender to inform work at Black British Academics; and to explore and articulate their experiences through counter narratives.³¹

Since 2001, France has had the *Irene Joliot-Curie Award* to make excellent women scientists visible. Each year, three awards are usually given to three women: one is a young scientist (€15,000); the second is the woman scientist of the year (€40,000), who has made a remarkable contribution to her public research domain; and the third is a woman in entrepreneurship (€15,000), who has either created an innovative firm or has used her scientific excellence in private research.³² Over the last three years, the Academy of Sciences and Technologies has provided an international jury to ensure high-quality awardees. In addition to making the women researchers more visible, all awardees are now part of high-level national scientific councils, thanks to a law that makes it mandatory to reach gender balance on all committees.³³

2.4. Improving work environment, work-life balance and dual-career opportunities

2.4.1. Introduction

The extent of general regulations to improve work environment, work-life balance and dual-career opportunities varies significantly among the assessed countries. There are significant differences in the availability of welfare benefits like parental leave, childcare facilities, work-time regulations, etc. Hence, the need for targeted measures within the research sector varies from country to country. In this chapter, we start with some examples of general welfare schemes, and we then focus on measures and frameworks specifically targeted at the research sector. These measures include e.g. career funding schemes for female researchers with family commitments, childcare facilities, relief from teaching duties to catch up with research after parental leave, research assessment and research funding that try to mitigate the effects of parental leave, and dual-career initiatives. Some of these measures are used to compensate for less generous universal welfare benefits. The chapter also includes measures to prevent sexual harassment, because sexual harassment has a negative impact on the working environment.

2.4.2. General welfare benefits

Some of the assessed countries have more generous welfare benefits than others. For example, Norwegian parents are entitled to 49 weeks of paid parental leave, of which a minimum of 10 weeks are reserved for the father. Since

31 For more on Black British Academics and the Black Sister Network, see: <http://blacksisternetwork.blackbritishacademics.co.uk/home>

32 For more information about the award, see: <http://www.enseignementsup-recherche.gouv.fr/pid24580/prix-irene-joliot-curie.html>

33 Law of 22 July 2013 on Higher Education and Research. see 2.1.2.

2009, parents in Norway are also entitled to childcare facilities for all children who are one year of age or older. Spain has introduced a national plan—“plan Concilia”—to promote work-life balance; it is based on the 2007 Equality Law and the National Strategic Plan for Equal Opportunities. The plan regulates maximum working hours and secures a flexible work schedule, as well as paid parental leave, among other measures. In 2013, German parents got the right to childcare for all children between the ages of one and three. A federal investment programme ran from 2008 until 2013 to establish a sufficient number of childcare places. Although the duty to establish additional childcare was left to the municipalities, the federal government and some state governments supported the creation of new facilities, but faced challenges in obtaining full child care coverage.

2.4.3. Parental/child benefits and employment-related regulations

Our assessment provides several examples of initiatives specific to the research sector. Both Switzerland and the UK have career funding schemes for female researchers with family commitments. The Swiss National Science Foundation offers *Marie Heim-Vögtlin grants* to excellent female doctoral students and postdocs who had to interrupt or reduce their research work due to family commitments and whose chances of obtaining other funding reduced due to their non-linear career path. The researchers apply for funding for a research project that can last up to two years. The grants cover a portion of the research costs as well as childcare costs, and it is possible to work part-time. Since its inception in 2008, between 30 and 40 grants have been awarded each year.³⁴

The equivalent scheme in the UK is the *Dorothy Hodgkin Fellowship*, which supports outstanding young scientists who require a flexible working pattern due to personal circumstances, such as parenting, caring responsibilities or health issues. The funding includes a salary for up to five years and research expenses. The researchers have the opportunity to work part-time or to convert from full-time to part-time and back again. They can also claim some funds for family support, e.g. the cost of childcare during a conference or collaborative visit abroad. Six new fellows were appointed in 2013, and a similar number received funding in 2012. Numbers from 2013 show that since the scheme started in 1995, 212 appointments have been made, and 94% of the fellows have been female.³⁵

Further, the *Daphne Jackson Trust* aims to help retain a talented and diverse STEM workforce in the UK by offering two-year, part-time *fellowships* that include mentoring and retraining. The fellowships are targeted at talented researchers who have had a career break of two years or more to bring up children,

34 For more information about Marie Heim-Vögtlin grants, see: <http://www.snf.ch/en/funding/careers/mhv-grants/Pages/default.aspx>

35 According to a Royal Society submission to the Science and Technology Committee's inquiry on Women in STEM careers from 23 October 2013

relocate with a partner, or look after elderly or disabled family members, or who have paused in their research because of illness. According to the Trust, “women returning after a career break to bring up children often initially want to return part-time to accommodate child care arrangements and the Trust’s two-year part-time fellowship offers that flexibility.” The trust works with learned societies, charities, research councils and universities to sponsor Daphne Jackson Fellows, and universities act as host institutions. Between 1992 and 2012, 250 STEM researchers received a fellowship and returned to research. According to the Trust, over 90% of fellowship recipients are women.³⁶

These kinds of funding schemes can be good opportunities for the women who obtain them, but they do only assist a few women each year. The Swiss grants go to between 30 and 40 women each year, and the two UK fellowships, combined, help around 20 per year. All three schemes are given to excellent researchers. Hence, they help to retain the most talented women, but the great majority of female researchers are not affected.

Since they started in 2000, the *Swiss federal programmes for equal opportunity for women and men* at universities and at universities of applied sciences have included initiatives to promote work-life balance. The first three programme periods consisted of three different modules, of which one was dedicated to work-life balance projects at universities.³⁷ The most significant outcome was that it enabled all universities to double existing childcare facilities or set up new ones. More than 200 childcare places were created. In addition, flexible measures, like holiday care, lunch tables and conference/meeting care for children, were introduced, as well as “last-minute” nursery places reserved for the children of female researchers recruited from abroad. All childcare facilities are now part of the regular budgets of universities. In France, CNRS is currently developing a policy for *covering extra child-care and dependent-care costs* incurred by work-related travels, and a work-time management charter.

Facilitating childcare could be seen as a measure that compensates for less generous universal welfare benefits (i.e. the general availability of childcare facilities). One could also argue that the career funding schemes for female researchers with family commitments compensate for the lack of general benefits: in countries where people feel parental leave is too short and childcare availability insufficient, women are more likely to have a career break when they have children.

³⁶ For more information, see e.g. the Daphne Jackson Trust’s annual reports: <http://www.daphnejackson.org/news/reports>
See also the 2009 report “Real Returners. The Stories Behind the Success”:
<http://www.daphnejackson.org/news/reports/Daphne%20Jackson%20Trust%20Real%20Returners%20Sept%202009.pdf>

³⁷ Read more about the Swiss federal programme in 2.3.2.

A Slovenian example shows the importance of securing PhD students’ rights to welfare benefits. Since 1985, Slovenia has had a funding initiative called *Young Researchers* for PhD students, which has increased the number of PhD students, especially among women. Public and private research institutions can get funding for employing the student on a fixed-term contract. It differs from a regular fellowship in that the PhD students are included in a research group at the institution. They are also entitled to social security benefits and public health care. Data shows that the number of female PhD students rose particularly after Slovenia introduced this initiative, which allows students to take paid parental leave and leave to take care of children.

There are also a few examples of initiatives that mitigate obstacles that are specific to the research sector. In France, both the Ministry for Higher Education and Research and CNRS provide a *relief from teaching duties* to catch up with research after parental leave. In Belgium, the FNRS gives an *extension of a mandate or a grant* when it is suspended due to maternity, paternity or adoption leave. Also, female researchers get one year’s extension per child when applying for fellowships and contracts. For instance, normally researchers would have to apply for a PhD fellowship within three years of completing their master’s degree. If they have a child, the limit is extended to within four years of completing their master’s degree. The UK has introduced a new system for assessing the quality of research in higher education institutions called the *Research Excellence Framework (REF) 2014*, which tries to mitigate the effects of maternity, adoption or paternity leave. Most importantly, if researchers have taken time off from work because of pregnancy/maternity, paternity or adoption, the number of research publications (or other kinds of scientific productivity) they are expected to produce is reduced. Researchers who are pregnant or on maternity leave should not be overlooked during the institution’s submissions process. Funding bodies will use the assessment outcomes to inform their allocation of research funding to institutions of higher education from 2015–16.³⁸

2.4.4. Dual-career initiatives

Since 2008, German universities have established quite a number of dual-career services. In 2010, experts from 20 dual-career services initiated the *Dual-Career Network Germany (DCND)*. Today it has 35 members, including non-university research institutes and local/regional dual-career networks in which different institutions collaborate.

The dual-career services give advice and support during the regular job searches of dual-career partners—they write letters of recommendation, give advice on how to improve applications and develop a job-search strategy. They do not offer dual-career recruitment, meaning they do not actively recruit the partner.

³⁸ For more information about the Research Excellence Framework, see: <http://www.ref.ac.uk>

In the network, they exchange experiences and best practices and give mutual advice on how to handle special/difficult “cases.” The members have worked out criteria and structures for quality dual-career work to be applied nationwide. The DCND encourages the acceptance and integration of dual-career services into universities and research institutions, and it provides information about dual-career issues on a national and international level. In order to professionalise its members, the network organises training sessions and seminars, e.g. on career counselling, intercultural training, quality management and PR.

According to DCND, the main impact of the network is a raised awareness of dual-career issues in the “war for talents.” The “trailing (female) spouse” is no longer considered standard; instead, one assumes that recruited researchers come with highly qualified partners. More and more universities place hints in their postings for professorships that a dual-career service is available. That means that the partner is also “on the screen” at an early stage, and this was not the case until very recently. Within universities, the number of requests for dual-career support is rising, not only from newly appointed professors but also from postdocs and younger researchers. These changes in recruitment processes have also changed the outlook on candidates: they are less often seen merely as professional individuals and are more often seen as part of a family; this shift promotes an awareness of work-life balance in general.

The *Swiss federal programme for equal opportunity for women and men at universities* started including measures to support dual-career couples in its third programme period (2008–2012). The programme implemented two instruments:

1. A funding pool of CHF 800,000 is provided to support a partner’s career or to provide a cushion for family expenditures.
2. A budget of CHF 400,000 was allocated to the universities for the implementation of dual-career–couple concepts, meaning CHF 40,000 per university.

CRUS’s evaluation of the dual-career measures in the third programme period³⁹ proposed to drop the funding pool in the fourth period because of high costs and little effectiveness, and rather to seek change at a structural level. They proposed e.g. that universities should treat dual-career couples as the norm and adjust personnel policies and working conditions for all employees accordingly, that they should place more emphasis on family-friendliness, and that they should have transparent rules for how dual-career issues are integrated into appointment procedures. They also proposed that the dual-career and wel-

³⁹ For more information, see *Dual-career couples at Swiss universities: Evaluation of the Swiss Federal Equal Opportunity at Universities. Programme, 3rd period 2008–2011: Summary*

come services that had been established during the third period should start networking to improve their services.

In the fourth period (2013–2016), the organisation of the programme was restructured and universities’ funding is now based on their gender equality plans (see 2.3.2). There are, however, some issues that each university must address in their plan by providing suggestions on how to address them. Dual-career support for professors and junior academics is among the suggestions, as well as work-life balance measures for dual-career couples and others with family responsibilities.

2.4.5. Anti-harassment measures

Many countries have laws that forbid sexual harassment. To give an example, in France, a new law on sexual harassment was passed in 2012, which requires that employers try to prevent harassment and that they act on cases of harassment at the work place. In its *Roadmap for Equality between Women and Men*, the French Ministry for Higher Education and Research initiates *several anti-harassment measures*: the ministry will integrate the fight against gender violence into the rules against hazing and raise awareness in the higher education and research sector of legislation against sexual harassment. They will launch a study of sexual harassment in the sector and initiate an awareness-raising campaign. In addition, the ministry will contribute to intergovernmental cooperation on the issue by providing research on violence against women.

CNRS has launched its own *plan for fighting sexual harassment*. The President signed a circular in November 2013 on the definition of, prevention of and punishment for sexual harassment at CNRS, which was disseminated to all personnel. A factsheet is available online, and the Mission for the Place of Women at CNRS has devised a training scheme on sexual harassment for key players.

However, experience shows that sexual harassment is a difficult issue to tackle juridically, ethically and as a research topic. For example, a recent study⁴⁰ by the European Union Agency for Fundamental Rights shows that Nordic countries have the highest number of reported cases of harassment. But this does not necessarily mean that sexual harassment is more widespread in these countries. This be due to different definitions of sexual harassment, be due to the Nordic countries having a higher number of women in the work force or be due to the fact that sexual harassment as a phenomenon is more discussed in these countries. A common challenge for researchers who study sexual harassment is that instances that are legally defined as harassment are not defined as harassment by the victims themselves.

⁴⁰ See European Union Agency for Fundamental Rights (2014): *Violence against women: an EU-wide survey. Main results*. Luxembourg: Publications Office of the European Union. <http://fra.europa.eu/en/publication/2014/vaw-survey-main-results>

Experiences in Norway show some other difficulties. Sexual harassment is prohibited and employers are accountable, as in France. Hence, many universities, university colleges and independent research institutes have *plans that specify anti-harassment measures and reporting routines*. Nevertheless, several research institutions have stopped asking about sexual harassment in work environment surveys because they think it would be hard to know how to act on potential reports of sexual harassment from anonymous employees. Others argue that turning a blind eye to the problem does not solve anything. There have also been debates about which authority is the best to handle sexual harassment cases. Today, they are handled by the courts. But the number of reported cases to the courts does not reflect the amount of sexual harassment reported in studies. Therefore, it has been suggested the Equality and Anti-discrimination Ombud should handle the cases, to give those subjected to sexual harassment the same low threshold services that are accessible to subjects of all other sorts of discrimination.⁴¹

2.5. Facilitating in-/outgoing researcher mobility for women researchers

2.5.1. Introduction

Researcher mobility between countries, institutions and sectors is increasingly considered an important factor in the promotion of quality in research, the dissemination and spread knowledge, the formation of research networks and the development of research career opportunities. The European Commission considers researcher mobility of vital importance to the realisation of the ERA and the free movement of knowledge and people across borders. To achieve a high level of mobility, the EC has introduced measures to fund researcher mobility, such as Marie Skłodowska-Curie Actions, and policy measures to remove barriers to mobility, including barriers that make it harder for one gender to pursue a research career. Policy measures to secure researchers' rights are important in this context, such as Charter and Code and "Money follows researcher." Horizon 2020 has extended the focus on mobility to include mobility between sectors, to promote research-based innovation.

Despite this focus, a fairly limited number of mobility measures have been reported through our assessment, but we have found initiatives to promote both mobility between countries, mobility between sectors and mobility between institutions. From a gender perspective, we argue that it is most important to initiate measures that promote in- and outgoing mobility between countries for researchers at the early stages of their career. The reason is simply that this

⁴¹ For more information about challenges and debates about sexual harassment in the research sector in Norway, see:
<http://eng.kifinfo.no/c62967/nyhet/vis.html?tid=83013>
<http://eng.kifinfo.no/c62967/nyhet/vis.html?tid=81966>
<http://eng.kifinfo.no/c62967/nyhet/vis.html?tid=81681>
<http://eng.kifinfo.no/c62967/nyhet/vis.html?tid=81510>

is a crucial period for building a future research career, and it often coincides with starting a family and having responsibility for young children. Combining caring responsibilities with mobility is demanding, and there is reason to believe that this makes women researchers more vulnerable than men. In the description below, we therefore describe the initiatives to promote international mobility. First, we present two examples of economic incentives, which are the only reported initiatives that take gender perspectives into consideration. We then describe Spain's legislation to promote researcher mobility, and we conclude with the ERA initiative EURAXESS. EURAXESS is also used on a national level by participating countries to increase researcher mobility. Dual-career initiatives also help to facilitate in- and outgoing mobility for women researchers, but these initiatives were described in 2.4.

2.5.2. Economic incentives

The Swiss National Science Foundation (SNSF) has initiated several funding schemes to promote international mobility. Three of them are funding schemes to facilitate mobility at different career stages—one for doctoral students (Doc. Mobility), one for early postdocs (Early Postdoc.Mobility) and one for advanced postdocs (Advanced Postdoc.Mobility). Researchers can apply for funding to work at a research institution abroad for a certain period. The study "Gender and Research Funding. (GEFO)" commissioned by the SNSF showed that women are more mobile early in their research career, and this is one important reason why SNSF has a mobility scheme for PhD students.⁴² This scheme is therefore important for female PhD candidates; it gives them an opportunity for a research stay abroad at a stage when most still do not have responsibility for children. The SNSF has made it possible to split Advanced Postdoc.Mobility stays in two due to family reasons, to increase the number of women researchers who apply. Since September 2014, this scheme also includes the possibility for advanced postdocs to request a grant for a research period upon returning to Switzerland—to complete the project conducted abroad or to launch a new one. The return grants are aimed at researchers with family care duties.

The SNSF's statistics for 2013 show that even though more men apply for and receive these mobility grants, gender representation is quite balanced at PhD level. This supports both the hypothesis that women are mobile at this early career stage and the argument that this is an important mobility measure for women. The number of women drops at early postdoc level but is still close to 40%. And the percentage of women rises again at advanced postdoc level. The latest figures show that women comprise 52% of the 21 postdocs to be granted

⁴² The study «Gender and Research Funding. (GEFO)» (2008) by Regula Julia Leemann and Heidi Stutz is available online:
http://www.snf.ch/SiteCollectionDocuments/wom_ber_gefo_synthesis_report_e.pdf

a return grant since their introduction in September 2014.⁴³ Hence, one could argue that the mobility incentives for women are quite successful.

In Germany, the Alexander von Humboldt Foundation offers a wide range of fellowships and awards to promote in- and outgoing researcher mobility at different career stages. One of these schemes is the prestigious Alexander von Humboldt Professorship programme, which enables internationally leading academics from all disciplines to come to Germany and strengthen German research. The Foundation, however, has explicitly recognised that they have trouble recruiting women in their programmes. On their website, they state that “the percentage of women amongst both the applicants and those sponsored is much lower than that of their male colleagues” and that “the more advanced the career stage, the greater the problem becomes.” Hence, they want to construct family-friendly sponsorship programmes that are attractive to female academics. The academics they sponsor are eligible for allowances that support marital partners and children under 18 that accompany them to Germany. Further, “time spent on child-rearing or other forms of care can be taken into account in the application process and fellowships can be extended or interrupted if a child is born during the sponsorship period.” The Foundation has a section on its website devoted to equal opportunities for women, which includes relevant questions and answers for women academics with families who would like to apply.⁴⁴ The website also presents statistics that show the representation of women according to discipline and region.⁴⁵ In 2013, women received 25.4% of fellowships and awards given within the natural sciences, 17.8% within engineering and 42.2% within the humanities. One could argue that the Foundation is well aware of their challenge in recruiting women and that they have taken some steps to recruit more, but still, numbers show that these steps are not sufficient.

2.5.3. Legislation

Spain has legislation that supports researcher mobility. The *Law of Universities* encourages different types of mobility. The *Law of Science, Technology and Innovation* states that research institutions, public universities and health institutions must promote geographical, intersectional and interdisciplinary mobility as well as mobility between the public and private sectors, and must recognise its value as a means of enhancing scientific knowledge and promoting the professional development of research staff. Practicalities regarding how to promote

⁴³ Since the return grants were introduced very recently, the numbers are still very small. The SNSF's figures by November 2014 show that: 52 postdocs asked for a return grant (44% of them women); 21 applied successfully (52% of them women). Of the 52 applicants, 14 men and 10 women are married with one or more children. Of the 21 successful applicants, 7 men and 4 women are married with one or more children.

⁴⁴ For more information, see: <http://www.humboldt-foundation.de/web/equal-opportunities.html>

⁴⁵ For more information, see: <http://www.humboldt-foundation.de/web/statistics.html>

mobility, however, have yet to be developed and incorporated into the relevant level of regulatory measures. In addition, Spain has reported having legislation that assures researchers' rights in relation to mobility, i.e. an employee has the right to keep his or her job as well as his or her seniority and pay level during temporary leaves that do not exceed five years.

The legislation is general and does not take gender explicitly into account. Spain has reported having annual statistical reports on mobility, but “only some information disaggregated by sex.”

2.5.4. EURAXESS

*EURAXESS - Researchers in Motion*⁴⁶ is a joint initiative of the European Commission and the countries participating in the European Union's Framework Programme for Research. EURAXESS provides access to a complete range of information and support services for researchers wishing to pursue their research careers in Europe or, at very least, to stay connected to Europe. Since 2004, EURAXESS is established in 40 member states and associated states to the EU, with national web sites providing useful information for mobile researchers. Around 200 service centres give personalised assistance to researchers and their families and they have dealt with more than 1.2 million inquiries since the registration of inquiries started in 2007.

EURAXESS will now expand its services. In the H2020 programme Science with and for Society (SWaFS), EURAXESS is explicitly stated to support the career development of mainly young researchers in Europe, with a particular focus on female students and researchers, including mobile and non-mobile ones. The call describes the need for new services that should include e.g. the set-up of career development centres and/or support for dual careers, support to researchers' integration in SME's and industry in general, better integration of researchers into the culture of the host country and mentoring programmes for researchers. Services should also include dedicated gender-specific information on the following: returners' schemes (e.g. fellowships or other opportunities aimed at researchers who had a career break, to facilitate their re-entry into research), programmes aimed at female researchers, and the promotion of GAP implementation at higher education institutions and research organisations.

⁴⁶ For more information about EURAXESS, see: www.euraxess.eu

3. Analysis

3.1. Identify decision-making structures and procedures at regional and national levels

3.1.1. Main findings

- Legal regulations on gender equality are well developed in many countries.
- The use of legislation as a tool differs, and the level of detail varies. It is common to have legislation on gender equality, higher education and research that provides a general framework for targeted initiatives. Some countries have incorporated concrete measures in their legislation.
- The systematic implementation, monitoring and follow-up of legislation and schemes vary significantly.
- Dedicated national units within ministries (e.g. Equal Opportunities and Anti-Discrimination Office in France, Commission for Women in Science in Slovenia, Women and Science Unit in Spain) work to influence national policy on gender in research, promote gender balance, monitor the research sector and report on the implementation and impact of laws and regulations.
- Independent national committees established outside ministries (e.g. Committee for Gender Balance in Research in Norway; Committee on Women in Science, Engineering, and Medicine in the USA) are advisory boards and watchdogs for both ministries and institutions.
- The national gender equality plans of research funding organisations (RFOs) (e.g. the Gender Strategy and Action of the Irish Research Council; the Policy on Gender Balance and Gender Perspectives in Research and Innovation of the Research Council of Norway) or ministries (e.g. the French Roadmap for Equality between Women and Men; the Spanish National Strategic Plan for Equal Opportunities; Swiss national action plans for the federal programmes of universities and institutions of applied sciences) typically support the development and roll-out of national initiatives (e.g. at ministries of research funding organisations) and raise awareness about gender strategy and action plans among potential applicants (e.g. to research funding organisations).
- The work to develop and improve sex-disaggregated statistics has priority in many countries, and all the assessed countries from Europe report regularly to She Figures.
- General action plans are mandatory by law in some countries (e.g. Spain, France, Norway), are a requirement for research funding (Belgium) or are a crucial instrument (Switzerland, the UK). There are challenges connected to improving the quality of the plans, monitoring their progress and to sanctioning gaps.

3.1.2. Discussion

- National legislation in some countries requires gender equality units/officers in research institutions. There, officers implement general action plans, monitor gender-related work and gather statistics (e.g. France, Germany, Spain). Some countries also have official networks for gender equality (e.g. Germany, Spain).

A precondition for structural change is the creation of an evidence base e.g. through sex-disaggregated data on recruitment, retention, promotion, pay, and committee representation; gender impact assessments; and staff surveys. The EU *She Figures* covers some of these parameters. Still, there is a need for improved and more detailed data based on new and better indicators. GENDER-NET will contribute to developing these indicators. An input to future monitoring, statistics and indicators is discussed in chapter 3.6.

Legislation provides a general framework and a foundation for targeted initiatives and measures to improve gender equality. However, a typical challenge for legislative/regulatory requirements is implementation at institutional level, e.g. requiring that institutions produce gender equality plans ensures neither the quality of the plans nor their implementation. Requiring gender equality officers/units does not ensure that they the support of leadership, which affects the possibility of creating robust measures and lasting change. Whether laws are implemented successfully or not can to some extent depend on culture and traditions. However, there seems to be a need for structures to help to implement the laws and additional targeted measures to ensure success.

National plans and strategies, both ministerial and at national research funding organisations, that specifically target gender equality in the research sector can facilitate the implementation of gender equality legislation. However, similar to the problems of legislative change, plans alone do not necessarily make a difference. There is a gulf between written words and action. Thus, means for implementation and follow-up are needed. The assessment shows examples of mechanisms and methodologies that can improve implementation at both national and institutional levels.

One example is the establishment of a dedicated unit within the corresponding ministry to promote gender equality in research. Such a unit can aid integration of gender equality measures into national policies. It can develop and recommend measures to ensure the implementation of different laws, regulations and strategies; monitor and evaluate their implementation; and propose improvements both to the policies and to the implementation of strategies. An alternative is an independent national committee established outside the ministry. Even though such a committee has no direct influence on national policies, it can function as a watchdog, advisory body and mediator in relation to the ministry's work and national policies, as well as in relation to national

research-funding agencies, other stakeholders and research institutions. To give an example, the Committee for Gender Balance in Research in Norway combines direct interaction with gender equality officers and top management in research institutions with meetings with ministry, funding agencies and other stakeholders. It also provides a well-developed website that disseminates knowledge and initiates debate.

Our material shows that most countries in one way or another require research-performing organisations (RPOs) to have gender action plans (GAPs). The ERA Progress Report 2014 shows a significant correlation between the existence of national laws, strategies and/or incentives specifically aimed at fostering institutional change, including GAPs, and the implementation of measures at institutions. Still, there seems to be a need for specific follow-up measures in order to successfully implement the GAPs. In particular, challenges are connected to improving the quality of the plans, monitoring their implementation and sanctioning gaps. Structures at a national level, such as dedicated units and independent committees, may meet these challenges by monitoring GAPs and initiatives and ensuring leaders discuss GAPs with experts and authorities, which can positively influence institutions' gender equality work. The material also shows that gender equality units/officers and networks in research institutions play a crucial role regarding the implementation of GAPs.

3.2. Anchoring gender equality issues at leadership level

3.2.1. Main findings

- It is commonly accepted that leadership commitment and involvement is vital. However, there are surprisingly few measures specifically targeting leaders. Only two types of measures were reported in this study:
 1. Top-level leadership committees (e.g. COMEGAL at ministry level and Steering Committee for Gender Equality at CNRS in France) are established to ensure the commitment of top-level higher education and research leaders to gender equality plans, and to ensure their contribution to the advancement of measures to promote gender equality.
 2. Training is offered to raise awareness and knowledge of gender equality issues and social stereotypes among decision-makers at different levels (e.g. Acting for Gender Equality at CNRS in France). Incoming young professors get training in gender equality and gender awareness in parallel with training for leadership (e.g. People and Financial Management Training in Switzerland).
- There are also examples of training for staff in general (Spain) and of a communication campaign for staff (e.g. Transformational Gender Action Plan in France), including e-learning modules.

- From 2015, CNRS's (France) top leaders have decided to include two gender equality indicators in a set of 45 key performance indicators for the organisation, to monitor CNRS's progress towards its set goals.

3.2.2. Discussion

Even though the commitment of institutional leadership is, in one way or another, a goal of many, if not most, of the initiatives that are described in this report, initiatives solely aimed at promoting leadership involvement are far from well developed. However, the assessment suggests that such initiatives seem to be crucial to improving gender equality in the research sector. The initial findings from the leadership training provided at CNRS prove that the training initiates a positive process – leaders gain knowledge, get engaged and start promoting gender equality in different ways. Hence, they contribute to gender mainstreaming.

Top-level committees also contribute to gender mainstreaming, as they make gender equality part of leadership's agenda and facilitate leadership's involvement. To give an example, the Steering Committee for Gender Equality at CNRS has responsibility for monitoring the implementation and progress of their T-GAP, and COMEGAL has a working group that tries to harmonise gender-disaggregated statistics in institutions and make them compatible.

So although scarcely developed, these kinds of initiatives have the potential to make leaders committed to gender equality measures and thus contribute to gender mainstreaming and structural change. In the future, we need to develop and implement new measures and methods of securing leadership involvement. Particular attention should be paid to the involvement of lower-level management, as their involvement is of critical importance and presently lacking. One of the planned transnational GENDER-NET actions is to develop gender equality training for top-level and lower level management.

3.3. Recruitment, retention and advancement of women researchers, including leadership

3.3.1. Main findings

- There has generally been a shift from measures that are targeted at individual women researchers (fixing the women) to measures that promote women in research through improving institutions' gender equality work (fixing the institutions). One example is to provide government funding for gender equality work done on the basis of the institutions' individual gender equality plans instead of funding for the promotion of individual women (e.g. in Switzerland).
- There are initiatives where gender equality requirements are linked to general funding mechanisms in several ways:

1. A special emphasis on gender balance is articulated in general calls of proposals for research funding, which request that applicants give a detailed description of how they would work to recruit women and promote women researchers' career development (e.g. Centres of Excellence and Centres for Research-Based Innovation in Norway, Severo Ochoa Centres of Excellence in Spain).
 2. Special requirements (e.g. institutional gender equality plans, 4:6 rule, priority from women applicants) are embedded in national funding schemes (e.g. in Belgium).
 3. Institutions can receive funding for tenure-track positions for women if they qualify with gender equality standards (Programme for Women Professors in Germany).
- There are award schemes for institutions where self-assessment, gender equality plans and the progress on gender equality activity form the criteria for evaluation (e.g. the Athena SWAN Award in the UK detailed in the parallel report on national/regional Award schemes). Some national programmes promote women researchers through competition for funding. These programmes are normally based on institutions' gender equality plans and gender equality work (e.g. NSF-ADVANCE in the USA, BALANSE in Norway).
 - Research-Oriented Standards on Gender Equality, in the format of a self-commitment, make research institutions' gender equality work count in their application for research funding (e.g. in Germany).
 - An internal committee (e.g. at CNRS in France) reviews procedures and practices for the evaluation of researchers in order to propose concrete measures that will favour gender equality and gender balance.
 - There are national initiatives that enhance individual female researchers' careers through professional development (e.g. Black Sister Network and the Aurora Programme in the UK, SFI Advance Award Programme in Ireland, Springboard Programme in France).
 - Other national initiatives enhance researchers' skills and professional development in general (e.g. Statement of Expectations for Doctoral Training, Research Councils UK and Vitae, UK).

3.3.2. Discussion

There has generally been a shift from measures that are targeted at individual women researchers to measures promoting women in research through improving institutions' gender equality work. These measures typically include funding schemes and awards, which support the various institutions' work on gender equality and set gender-related requirements for funding or specific standards to be followed. A concrete example of gender mainstreaming in

research funding is to include gender-specific requirements in calls for proposals, e.g. in the Research Council of Norway's Centres of Excellence Schemes, the applicants are required to describe how they will recruit women and promote their career development in the research project plan. This kind of measure has proved to have significant impact on both the actual number of women recruited and the total share of senior positions women hold.

There are also several examples of funding schemes enhancing individual women researchers' professional development. These schemes represent good opportunities for the women who obtain them, but they are only available to a few women each year. These funding schemes support the most talented women, but the great majority of female researchers are not affected.

Some national initiatives enhance research careers in general. Even though gendered career challenges are not particularly addressed by these initiatives, they provide men and women with the same tools and skills to improve their careers. The programme *Vitae: realising the potential of researchers*, which is managed by CRAC in the UK, is a well-defined platform where RPOs, RFOs, individual researchers and other stakeholders interact to improve researchers' career development and working conditions.

Another example is the UK Research Councils' (RCUK) common requirements for the support of all Research Council PhD students, outlined in the Statement of Expectations for Doctoral Training. These principles provide an overall framework of skills required for long-term careers, and both female and male PhD students obtain valuable skills and experiences that positively impact their employability.

As we can understand, the measures designed to recruit, retain and promote the advancement of women are diverse and can complement each other. Still, measures that clearly address the applicants' strategy for the recruitment and career development of women seem to have the greatest potential.

3.4. Improving work environment, work-life balance and dual careers

3.4.1. Main findings

- The extent of universal welfare benefits varies significantly among the countries studied. Some of the countries with less generous welfare schemes have introduced certain compensatory measures (e.g. different kinds of childcare support).
- There are examples of career funding schemes for female researchers with family commitments (e.g. Marie Heim-Vögtlin in Switzerland, the Dorothy Hodgkin Fellowship and Daphne Jackson Trust in the UK). The schemes take

into account non-linear careers, childcare costs, and the possibility of part-time work in addition to providing mentoring related to career breaks (e.g. Daphne Jackson Trust)

- A few measures target challenges specific to the research sector: e.g. relief from teaching duties to catch up with research after maternity leave (France), extension of a mandate or a grant suspended due to parental leave (Belgium), research assessment that mitigates the effects of parental leave (UK).
- The establishment of dual-career services (Germany, Switzerland) contributes to raising the awareness of RPOs about researchers' being part of a family. Experience shows that dual-career services positively influence the recruitment of new candidates and their career outlook, and that such services promote work-life balance.
- Reported anti-harassment measures include prohibition as well as dedicated research of the phenomenon, awareness-raising campaigns and training (CNRS, France) and intergovernmental reporting on violence against women.

3.4.2. Discussion

Welfare benefits vary significantly between the assessed countries. There is potential for improvement even in the countries with many family-friendly measures that benefit researchers.

To achieve real structural change, one also needs to take cultural aspects and career demands into consideration. The number and quality of publications have become a decisive factor in the provision of incentives as this measures research production. Hence, it has become increasingly important for researchers to publish extensively in order to have a successful career. They are also expected to network nationally and internationally, participate in international conferences and have research stays abroad. These requirements are not easily combined with family commitments.

One of the reported measures aiding those with family commitments are funding schemes that take into account non-linear careers and childcare costs, provide the possibility of working part-time, and offer family allowances and mentoring related to career breaks. The few extant examples of initiatives targeting research-sector specific challenges include e.g. relief from teaching duties so that female researchers may catch up with research after maternity leave. In addition, the German and Swiss examples show that dual-career services have a positive effect on gender equality because they tend to raise awareness of the researcher as part of a family.

All measures mentioned by the assessed countries seem to aid in obtaining work-life balance and in mitigating researchers' family issues. However, whether

most of these measures really lead to structural change or whether they just compensate for lack of welfare benefits is open to debate.

Still, the material shows that countries recognise work-life balance as crucial for researchers' careers and hence is a national and institutional responsibility.

3.5. Facilitating in-/outgoing researcher mobility for women researchers

3.5.1. Main findings

- In-/outgoing researcher mobility is considered as increasingly important to promoting quality in research, realising the ERA and providing individual researchers career opportunities.
- However, there are surprisingly few national initiatives promoting researcher mobility that take gendered challenges into consideration, and there are no mobility schemes for women only.
- There is little systematic monitoring of whether the mobility schemes provide different results for women and men.
- In the gathered material, there is one funder that offers mobility schemes specifically aimed at early career researchers (PhD) because women appear to be more mobile at this stage (Swiss National Science Foundation).
- Mobility schemes that target researchers at a later career stage intend to meet challenges connected to family and children. Examples of measures include providing a family allowance, permitting shorter stays abroad/splitting the period in two, allowing flexibility in or interruption to scholarship periods and considering time spent caring for or rearing children in the application process (e.g. Alexander von Humboldt Foundation - Germany, Swiss National Science Foundation).
- Spain reports having laws that promote geographical, intersectional and interdisciplinary mobility as well as mobility between the public and private sectors. This includes the right to relocation. However, the law is not operational at a practical level and does not take gender into account explicitly.
- EURAXESS will address gender in future improvements to services. It will set up career development centres and/or support for dual careers, provide support to researchers' integration in SME's and industry in general, encourage better integration of researchers into the culture of the host country and implement mentoring programmes for researchers. This should affect national-level programmes and policies as well.

3.5.2. Discussion

Although international researcher mobility is considered increasingly important—both to promoting quality in research and for individual researchers' career opportunities—there are very few national initiatives to promote mobility

that take gendered challenges into consideration. This is also true in countries that are at the forefront of promoting gender equality in research. The few examples reported in this study emphasise the importance of having statistics and other data that take gender and family situations into account in order to develop adequate mobility schemes. Systematic monitoring makes it possible to see whether these measures are working according to plan for both women and men, or whether they need adjustments.

A central finding of our assessment of mobility schemes is the striking absence of gender consideration. There are only a couple of mobility schemes in which gender is explicitly taken into account. There is no report of mobility schemes for women only, and the material shows little systematic monitoring of whether the mobility schemes provide different results for women and men. This means that in most of the assessed countries, gender is not mainstreamed in general mobility schemes. However, it does not mean that the general schemes cannot contribute positively to women's mobility, but it is unclear how institutions ensure that they do. It is also unclear whether mobility is better promoted for male researchers than for female researchers. Further, host countries may have a less family-friendly policy than researchers' home countries, which makes it harder for them to bring their family along. Female researchers are also not as welcome in all countries as male researchers. In addition, challenges for single-parent researchers are not addressed. Dual-career initiatives facilitate couples' mobility, while single parents are left aside, or at least not explicitly addressed.

3.6. Future monitoring, statistics and indicators

Most of the initiatives and measures described in this report are of a qualitative nature, e.g. legal regulations, action plans, schemes and management engagement. These measures can of course be quantified in the sense that the number of countries or institutions they exist in can be counted and compared. Such information is valuable as it can provide an overview of use of specific policies and measures, as well as forming the basis for analysing the use and distribution across countries and institutions. Furthermore, structured knowledge of which measures are in use can lead to policy-makers devoting more attention to this issue, as well as forming the basis for learning between countries. The use of policies and measures to stimulate gender equality and achieve structural change should therefore be monitored across Europe. It will probably be useful to select some key elements for monitoring, e.g. mainstreaming, management involvement, career enhancing measures etc. in order not to increase the reporting burden. The selection will be further discussed.

However, such figures do not tell us much about the effects of the measures themselves as the various initiatives and measures are carried out in a context and there may be combined effects of several measures. On the other hand, international comparative statistics and indicators for gender distribution already

exist (e.g. *She Figures*), and these statistics could be aligned with the monitoring of the use of specific policies and measures suggested above. From a methodological point of view, it is not possible of course, to infer that certain initiatives and measures are the direct cause of the observed gender balance. Effects are often long term and can rarely be attributed to one single cause. However, aligning the overview of initiatives and measures at the national and institutional level with statistics at the same levels can obviously inform the discussion and evaluation of measures and initiatives. If carefully designed, a monitoring system that combines policy measures and official statistics could be a very useful tool in the long run for achieving gender balance. Since regular monitoring of all policy measures identified in this report will be a time-consuming task, the first step will be to identify the measures that are expected to have the greatest effects and/or those most commonly used. This should be done carefully, taking into account the various ways in which the measures are designed and, consequently, the problems of comparability. Our overarching recommendation would be to start monitoring the extent to which, and in what ways, gender is mainstreamed in general research policies and funding mechanisms. Based on the findings in this report, we suggest concentrating on the following measures:

- The existence of special programmes to improve gender balance.
- The existence of specific legal provisions at the national level.
- The existence of mobility schemes, in combination with statistics for the gender balance of the schemes.
- Securing involvement in gender issues at leadership level is difficult to monitor since it is not easily identified. However, it could be considered whether to use the existence of training schemes or top-level committees as proxies.
- Monitoring measures for improving the working environment, work-life balance and dual careers can be done insofar as they are specific to the research sector, like those identified in this report. Measures that are general and do not specifically target the research sector are more problematic because it will be difficult to infer their effects on gender balance in research.

It is recommended to start a process to prepare the ground for such monitoring. The knowledge gathered through GENDER-NET could also be useful for further development of *She Figures* and other sources of statistics relating to the situation of women in science and research. Contact should be established with the Helsinki Group on Gender in Research and Innovation, the ERA Steering Group on Human Resources and Mobility (ERA SGHRM), the Science Europe Work Group (SE WG) on Research Policy and Programme Evaluation and the SE WG on Gender and Diversity to discuss further work along these lines.

3.7. Conclusions and recommendations

This report describes a wide range of national measures promoting gender equality in higher education and research institutions. As national contexts vary, so too does the design of measures. The material collected in this study is generally rich as regards gender equality legislation, plans and regulations, and there are some good examples of mechanisms that contribute to the implementation of laws and plans. There are also many examples of targeted, comprehensive initiatives for enhancing gender balance through institutional change. All these measures have proved to have a positive effect on gender equality. On the other hand, the material contains relatively few examples of measures specifically aimed at structural change, such as measures aimed at improving leadership involvement, international mobility and work-life balance.

It is also somewhat surprising that the material does not include an overall assessment of how the different measures are interlinked in the given national contexts. This could, in part, stem from a weakness in the template used to collect the information, since the questionnaire does not explicitly ask for such information. Nonetheless, this study indicates limited reflection on the integration of various national measures. There seems to be a great potential for further development of national measures that address different aspects of academic career development. For instance, funding schemes would benefit if the recruitment and retention of women, mobility, dual careers and work-life balance were addressed together. The material shows that this is rarely the case.

To achieve structural change, gender has to be mainstreamed in all areas. It would be beneficial to consider family commitments and dual-career constellations as the norm when developing human resources policies or reflecting on career development in general. If dual-career constellations and family commitments are regarded as the norm, this would also benefit researchers with fewer engagements. The result would be a better work-life balance for all.

Although leadership commitment and involvement are considered to be vital to structural change, methods for involving and committing management at different levels are still in an early phase. There is a potential for developing new methodologies to improve leadership involvement. National and institutional initiatives should be combined in this context.

3.7.1. Recommendations

The following recommendations are based on the examples presented in this report, as well as on areas we have identified as showing room for improvement:

1. Gender equality policies should be designed to ensure that measures strengthen and complement one another. To achieve this, we need to know more about how to move from theory to practice, and we need to develop methods for how different measures can and should be interlinked.
2. A platform should be established within the ERA to stimulate transnational learning on how to interlink measures that implement structural change.
3. National/regional policy initiatives and measures should be regularly monitored to create a structured knowledge base for possible actions to improve gender balance and equality.
4. A policy monitor should be aligned with already-existing statistics on and indicators for gender balance to inform policy discussions and to provide a basis for further analyses of the relationship between policies and their effects.
5. New measures and methods should be developed to secure leadership involvement at all levels. Particular attention should be paid to how national initiatives could complement institutional initiatives.
6. In calls for proposals, national/regional research funding organisations should explicitly request that the applicant (or institution), specify how the project will recruit women researchers, especially to senior positions, and contribute to gender balance in research. This should be integrated as a standard criterion in project/plan evaluation.
7. Funding schemes and other mechanisms that enhance mobility should address gender and family-related issues.
8. Work-life balance measures that target challenges specific to the research sector should be further developed.

Appendix

Appendix 1: Summary chart

The reported material has been categorised in five thematic areas. The chart gives an overview of reported measures corresponding to each country and theme. Several measures reported cover more than one area. However, in the report each measure is generally described under one headline only.

Country	Respondent / organisation	Decision-making structures and procedures	Anchoring gender equality at leadership level	Recruitment, retention and advancement of women researchers	Work environment, work-life balance and dual-career opportunities	International mobility for women researchers
BE	FNRS	x		x	x	
CH	WBF	x	x	x	x	x
DE	DFG/DCND	x	x	x	x	x
ES	MINECO	x	x	x	x	
FR	CNRS/ MENESR	x	x	x	x	
IE	HEA	x		x	x	
NO	RCN	x	x	x	x	
SL	MESS	x			x	
UK	ECU	x	x	x	x	
US	NAS	x	x	x	x	

Appendix 2: Template for assessment

Dear project partners of GENDER-NET, Gender Equality in Research Institutions through Structural Change

As you know, the GenderNet project will perform a joint assessment on the promotion of gender equality through structural change at regional/national level, through WP 2.2. The Research Council of Norway (RCN) is responsible for this task and we kindly ask you for your assistance in performing this joint assessment exercise. We think you are in the best positions to either do the assessment for your country yourself or to find the right organization and person within your country to do it.

The Description of Work (DoW) states that we will do an analysis and impact evaluation of existing national/regional programs and initiatives on gender equality. This includes national action plans, gender action plans at national institutions, research programs and national research funding organizations. The assessment should thus focus on impact of existing measures and their transferability to transnational initiatives. The exercise will contribute to exchange best practices and to select joint initiatives that could be implemented across countries.

RCN has developed a template for the assessment based on areas/themes, which according to the DoW, should be covered. The template is structured with the following themes/headings:

1. Recruiting, retaining and advancement of women researchers, including leading positions
2. Facilitating in-/out- going mobility for women researchers
3. Improving work environment, work-life balance and dual careers
4. Anchoring gender equality issues at leadership level
5. Identifying decision-making structures and procedures at regional/national level
6. Other relevant issues

How to fill in the template:

1. We would like you to fill in the template, keeping in mind that the purpose of the assessment is to analyze impact and the potential transferability of your measures, so please focus on these aspects in your answers.
2. In case you have more than one measure under each theme/heading, please fill in the template (questions 1-9) for each measure.
3. In case you have a measure which you think belong to more than one theme/heading, please put it below the theme/heading you find most appropriate and explain in questions 4-9 how it is also relevant to the other themes/headings.
4. In case you do not have any measure for one theme/heading, just leave questions 2-9 under this theme/heading open.
5. Please note, that information on awards and/or charters would not be within the scope of this exercise

If you have questions, please contact Anne Winsnes Rødland, awr@rcn.no
Tel: +47 22 03 80 88. Deadline for submission is February 28

RCN intends to contact you by phone for clarifications, interpretations and so on after having received your input, so you can elaborate your answers orally.

Thank you!

Best wishes from the RCN GenderNet – Team

Template for the joint assessment on the promotion of gender equality through structural change at regional/national level

1. Recruiting, retaining and advancement of women researchers, including leading positions

This theme/heading could for instance include:

- Targeted measures at national level towards women (as individuals) that enhance their recruitment, retaining and advancement.
- Targeted measures towards research institutions with the intention to enhance women researchers' recruitment, retaining and advancement

1. Do you have any measures related to this theme:

- Yes
 No

2. What is the name of the measure?

3. What kind of measure do you have?

- Specific Programs
 Mainstreaming measures
 Economic incentives
 Networks/networking activities
 Trainings/skills up-grading
 Other, please specify

4	What are the goals for the measure?	(Describe)
5	How is the measure implemented?	
6	Do you have any success criteria or indicators to measure success?	(Which?)
7	Has the measure been evaluated?	(include reference)
8	What is the main impact of the measure?	
9	Could you identify any legislative, organizational or cultural aspects that will impact transferability of your measure to other countries	(Which?)

2. Facilitating in-/outgoing researcher mobility for women researchers

This theme/heading could for instance include:

- Any measure at national level that facilitates mobility for women researchers (without being specifically targeted towards women)
- Targeted measures towards women researchers that improve their possibilities for becoming mobile.

1. Do you have any measures related to this theme:

- Yes
 No

2. What is the name of the measure?

3. What kind of measure do you have?

- Specific Programs
 Mainstreaming measures
 Economic incentives
 Networks/networking activities
 Assistance and guidance on practicalities
 Family oriented measures or actions
 Other, please specify

4	What are the goals for the measure?	(Describe)
5	How is the measure implemented?	
6	Do you have any success criteria or indicators to measure success?	(Which?)
7	Has the measure been evaluated?	(include reference)
8	What is the main impact of the measure?	
9	Could you identify any legislative, organizational or cultural aspects that will impact transferability of your measure to other countries	(Which?)

3. Improving work environment, work-life balance and dual careers

This theme/heading could for instance include:

- Any measure at national level that facilitates a gender equal work environment, work-life balance and/or dual career possibilities
- Targeted measures towards research institutions or researchers with the intention to improve work environment, work-life balance and/or dual career possibilities

1. Do you have any measures related to this theme:

- Yes
 No

2. What is the name of the measure?

3. What kind of measure do you have?

- Legislation
 Specific Programs

- Mainstreaming measures
- Economic incentives
- Employment-related regulations (working hours, leaves for sick children or similar)
- Parental and/or child benefits (please, give a description in any of the questions 4-7 below if this also applies to men)
- Optional prolonging fellowship period after parental leave
- Child care possibility
- Anti-harassment measure
- Other, please specify

4	What are the goals for the measure?	(Describe)
5	How is the measure implemented?	
6	Do you have any success criteria or indicators to measure success?	(Which?)
7	Has the measure been evaluated?	(include reference)
8	What is the main impact of the measure?	
9	Could you identify any legislative, organizational or cultural aspects that will impact transferability of your measure to other countries	(Which?)

4. Anchoring gender equality issues at leadership level

This theme/heading could for instance include:

- Any measure at national level that addresses leadership level with the aim to embed gender equality into management
- Targeted measures towards leaders that has the intention to improve gender equality within the research community

1. Do you have any measures related to this theme:

- Yes
- No

2. What is the name of the measure?

3. What kind of measure do you have?

- Specific programs

- Mainstreaming measures
- Gender equality embedded in national/regional guidelines for leaders
- Gender equality part of job description Leadership at top-level Leadership at lower level
- Gender equality included in leadership assessment and monitoring
- National/regional trainings on gender equality for leaders mandatory
Optional
- Other, please specify

4	What are the goals for the measure?	(Describe)
5	How is the measure implemented?	
6	Do you have any success criteria or indicators to measure success?	(Which?)
7	Has the measure been evaluated?	(include reference)
8	What is the main impact of the measure?	
9	Could you identify any legislative, organizational or cultural aspects that will impact transferability of your measure to other countries	(Which?)

5. Identifying decision-making structures and procedures at national/regional level

Here you can include any structures (legislation, rules, routines, procedures etc.) in place at national level that influence on women's research careers. Targeted measures towards women (as individuals) should be covered under the theme/heading Recruiting, retaining and advancement of women researchers, including leading positions.

1. Do you have any measures related to this theme:

- Yes
- No

2. What is the name of the measure?

3. What kind of measure do you have?

- Legislation (on board composition etc)
- Legislation specific for academia and/or research
- Mandatory monitoring and reporting on status and progress

- Moderate affirmative actions
- Gender Action Plan mandatory Optional Monitoring implementation
- Guidelines for appointment procedures (job advertisement profiles, appointment committees, callings for positions etc.)
- Other, please specify

4	What are the goals for the initiative/action?	(Describe)
5	How is the initiative/action implemented?	
6	Do you have any success criteria or indicators to measure success?	(Which?)
7	Has the measure been evaluated?	(include reference)
8	What is the main impact of the measure?	
9	Could you identify any legislative, organizational or cultural aspects that will impact transferability of your measure to other countries	(Which?)

6. Other relevant topic

If you have any other measure that does not fit into any of the headings above, please include it here.

1. What is the name of the measure?
2. What kind of measure do you have? Please specify

3	What are the goals for the initiative/action?	(Describe)
4	How is the initiative/action implemented?	
5	Do you have any success criteria or indicators to measure success?	(Which?)
6	Has the measure been evaluated?	(include reference)
7	What is the main impact of the measure?	
8	Could you identify any legislative, organizational or cultural aspects that will impact transferability of your measure to other countries	(Which?)

The GENDER-NET ERA-NET

GENDER-NET is a pilot transnational research policy initiative funded by the European Commission under the Science-in-Society work programme of the 7th Framework Programme for Research and Technological Development (2013-2016).

It is the first ERA-NET (European Research Area Network) to be dedicated to the common challenges still facing European research institutions in achieving gender equality in research and innovation i.e. the persistent barriers and constraints to the recruitment, advancement and mobility of women in the European scientific system, the lack of women in decision-making, as well as the limited integration of the gender dimension in research programmes and contents.

Coordinated by French CNRS, GENDER-NET brings together a balanced partnership of national research programme owners (e.g. ministries, national research funding agencies and other national organisations) as well as a number of Observer organisations, from across Europe and North America, all with a shared commitment to gender equality and synergistic expertise in gender and science issues.

Based on the mutual opening of their respective programmes and policies, partners have joined forces to carry out joint assessments of existing national/regional initiatives, to define priority areas for transnational collaborations and implement a selection of strategic joint activities, in an effort to reduce fragmentation across the ERA and help reach a critical mass of ministries, research funders, universities and research institutions across Europe engaging in the implementation of gender equality plans or related initiatives and fostering the integration of sex and gender analysis in research contents.

For more information, please visit our website : www.gender-net.eu

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