



Gendering the Academy
and Research: combating
Career Instability and Asymmetries



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GARCIA WORKING PAPERS

6

Toolkit for Integrating Gender-Sensitive Approach into Research and Teaching

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WHY?

As consistently advocated by European Commission¹ within FP5, FP6 and FP7, introducing a gender-sensitive approach makes research and teaching of higher quality and validity by:

- helping in making research results more relevant for society;
- enabling development of new research, teaching, and career progress paradigms in research institutions;
- enabling researchers to write more competitive proposals.

Because:

- a gender-balanced research teams perform better and attract top-level researchers;
- gender-sensitive approach induces researchers to use more sensitive research methodology in general;
- gender equality is an overarching principle of the Horizon 2020 programme.²

FOR WHOM IS THIS TOOLKIT INTENDED?

For all research and teaching staff (at all career stages: Full Professors, Associate and Assistant Professors and Postdoctoral Researchers) and project officers – especially those in test institutions involved in the GARCIA project (for the list of institutions see p. 12).

¹ As indicated in European Commission documents *Science Policies in the European Union: Promoting Excellence through Mainstreaming Gender Equality*. A Report from the ETAN Expert Group on Women and Science. European Commission, 2000; *Women and Science: Excellence and Innovation – Gender Equality in Science*. Commission Staff Working Document, Brussels 2005.

² See <http://ec.europa.eu/>.

WHAT IS THE PURPOSE OF THIS TOOLKIT?

The idea of this Toolkit is to help researchers integrate gender dimension in their ongoing research and teaching (of undergraduate, graduate and doctoral courses), and to apply while conceiving new projects and students' curricula – especially those in test institutions involved in the GARCIA project (see p. 12).

This Toolkit should help research and teaching staff in thinking in what way is gender relevant for their research and curricula.

WHAT IS A GENDER-SENSITIVE APPROACH TO CONDUCTING RESEARCH?

Gender-sensitive research takes into account the differences between men and women in all aspects of the research, from an initial idea, formulating research questions, objectives and methodologies to the outcomes and presentation of results.

Apart from integrating gender into the content, gender-sensitive approach strives to provide equal participation of both women and men in scientific work.

Gender-sensitive approach takes into account transgender and transsexual population as well.

WHAT IS GENDER-SENSITIVE TEACHING?

Gender-sensitive teaching pays attention to gender differences both in creating syllabus and in class conduct.

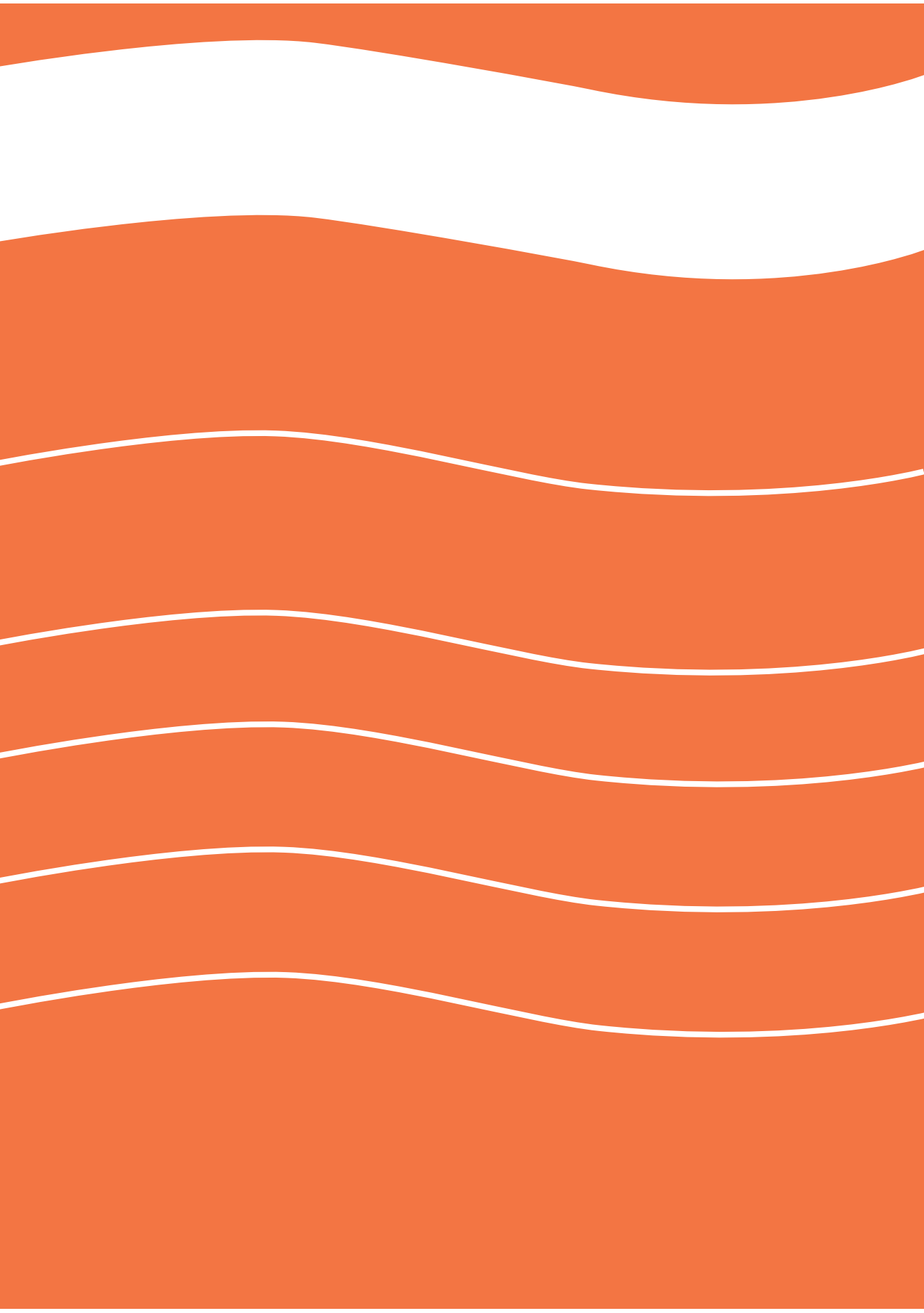
It means introducing students to gender dimension of the presented contents, including publications that take gender-sensitive approach into the courses readings, and giving homework assignments that demand from students to think about gender dimension of the subject.

Gender-sensitive approach to teaching provides equal opportunity to both female and male teaching staff across disciplines, attracts students of different genders, and is inclusive for transgender individuals as well.

Gender-sensitive teaching is thus more inclusive, while stimulating critical thinking.

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HOW TO USE THIS TOOLKIT?

This Toolkit provides practical guidance on how to integrate a gender-sensitive approach in research and teaching:

- by posing questions to academics that would encourage them to think critically about their previous research/teaching and inspire future, more gender-sensitive conduct;
- by using vivid examples of how gender is relevant for research and curricula in six test institutions involved in GARCIA project (see p. 12).

INTRODUCTION describes findings from the Reports on mapping gender-related content conducted in six GARCIA test institutions (see Appendix 2) and summarises common trends and challenges in gender mainstreaming noted in these institutions (see p. 12).

The **TOOLKIT OBJECTIVE** explains the main conceptual underpinnings behind the Toolkit. We explain the reasons for advocating holistic gender-sensitive approach, which does not claim that *every* research needs to be gender-related. Instead of this, gender dimension is considered as integral part of any social endeavour and therefore the science should recognise it as such.

The **RECOMMENDATIONS FOR INTRODUCING GENDER-SENSITIVE APPROACH** consist of suggestions: a) how to consider gender when compiling teaching and research teams (Introducing gender in project/teaching teams), and b) how to integrate gender into content of research and teaching (Introducing gender content) through three steps:

Step 1: How to design gender-sensitive research/course content?

By identifying research problems in gender-sensitive way, we suggest how to formulate gender-sensitive research questions. Here, we also draw attention how to detect gender stereotypes, inequalities, and gender biases.

Step 2: How to apply a gender-sensitive theoretical/methodological structure?

In this step, we provide details of gender-sensitive methodology, important part of which is to disaggregate data by sex and gender, as well as to analyse data in gender-sensitive way.

Step 3: How to produce gender-sensitive outcomes?

Here we suggest what could be gender-sensitive results of scientific research and teaching, and how to identify users and beneficiaries of scientific conduct in gender-sensitive way.

Finally, we identify **Resistance** to introducing gender-sensitive approach that some academics nurture, and provide reasonable answers to that.

Checklist at the end of the Toolkit, which a scientist could use to check the level of gender-sensitivity of their research and teaching or to bear in mind, while devising a new course or writing a new research project.


In **Appendix 1**, the list of existing toolkits about different aspects of introducing gender in various scientific fields is provided in order to enable more thorough application of gender-sensitive approach to research.

In **Appendix 2** are compiled all Reports on Mapping Gender Dimension in Research and Curricula conducted in test institutions of GARCIA project partners.



INTRODUCTION





This Toolkit is based on the reports that map gender perspective in existing research and curricula, which six project partners involved in GARCIA project conducted in following countries: Belgium, Iceland, Italy, the Netherlands, Slovenia and Switzerland. In each national context, we examined two test departments within one research institution: one from social sciences and humanities field (SSH) and the other from the field of science, technology, engineering and mathematics (STEM). The reports included the qualitative and quantitative analysis of research projects and curricula at two test departments during the year 2013, including also the analysis of the gender structure of the project teams, lecturers and students, if available. The GARCIA project partners analysed available data on the on-going research projects (e.g. project outline, web presentation, project summary) and courses, focusing specifically on objectives, tasks, methodology, theoretical background and expected results. The attention was given to detecting both presence and absence of gender perspective in research and curricula contents, focusing not only on inclusion, but also on the *exclusion* of particular content – the so-called “hidden curriculum”,³ which reinforces stereotypes about gender, ethnicity, race, class, and power relations. The reports also included comparative perspective between STEM and SSH fields, which allows a more detailed insight into interdisciplinary dynamics.

Despite the analysed data are collected in the national contexts of GARCIA project partners, this Toolkit does not have an intention to generalise these findings and present them as representative of the whole states, not even the whole Universities. Rather, it analyses the similarities and differences among respective beneficiary institutions, focusing only on particular institution and its test departments. Based on deep and multi-dimensional analysis, this Toolkit uses examples from test institutions to indicate various possible strategies of integrating gender-sensitive approach. These strategies are not meant to be strict rules to be applied, but rather suggestions for reflection that each project partner should accommodate to its own social and cultural context.

³ Philip W. Jackson, *Life in Classrooms*. New York: Holt, Rinehart and Winston, 1968.

GARCIA test institutions:

BELGIUM: Catholic University of Leuven

SSH: Institute for the Analysis of Change in Contemporary and Historical Societies (IACCHOS)

STEM: The Earth and Life Institute (ELI)

ITALY: University of Trento

SSH: Department of Sociology and Social Research (DSRS)

STEM: Department of Information Engineering and Computer Science (DISI)

ICELAND: University of Iceland

SSH: School of Social Sciences, Department of Political Science

STEM: School of Engineering and Natural Sciences, Department of Physical Sciences

THE NETHERLANDS: Radboud University Nijmegen

SSH: Institute for Management Research (IMR)

STEM: Institute for Mathematics, Astrophysics and Particle Physics (IMAPP)

SLOVENIA

SSH: Fran Ramovš Institute of the Slovenian Language, Research Centre of the Slovenian Academy of Sciences and Arts

STEM: Department of Agronomy, Biotechnical Faculty, University of Ljubljana

SWITZERLAND: University of Lausanne

SSH: Faculty of Social and Political Sciences

STEM: Faculty of Biology and Medicine (Section of Fundamental Sciences)

At the test institutions chosen for GARCIA project, gender-related research and curricula are institutionalised at different levels and forms, which depict different practices in introducing gender-sensitive approach in research and teaching. While majority of institutions have established gender studies centres or gender studies research groups, in some of them gender is not institutionally recognised and is absent from both research and curriculum. This is also related to each particular research context (main scientific topic of a test department) and to the fact, whether gender approach is part of institutional policy.

Gender studies research groups/centres exist at following institutions:

- Sociology and Social Research Department (Italy) – Centre of Interdisciplinary Gender Studies – CSG;
- Faculty of Social and Political Sciences (Switzerland) – Centre for Gender Studies (CEG-LIEGE);
- IACCHOS (Belgium) – Research Group for Gender Studies (GREG);
- Institute for Management Research (the Netherlands) – *Gender and Power in Politics and Management* research group.

Gender studies study programme exist in following institutions:

- Department of Political Science (Iceland) – MA in Gender Studies;
- Faculty of Social and Political Sciences (Switzerland) – until 2014/2015 there was a MA in Social Sciences with specialisation Gender Studies.

Two project partners contain institutional platforms, which are dedicated to structural integration of gender in research and teaching:

- University of Lausanne (Switzerland): Interfaculty Gender Studies Platform (PlaGe);
- University of Iceland: Equal Rights Policy 2013–2017 – emphasise importance of gender mainstreaming.

Project partners' reports provided an insight into common challenges in introducing gender-sensitive approach in research and teaching that are described in two following sections:

- 1) issues related to institutional and structural context of the tested institutions, approaching it from gender perspective: Do institutions find important to track gender-related topics in their research portfolio? How much research money is distributed to male and female project leaders? What is gender structure of research teams? What is the balance between female/male teachers and students?
- 2) common challenges in integrating gender as content in research and curricula: To what extent is gender part of the projects that are not specifically dedicated to gender? How gender-sensitive methodology is applied?

Gender in institutional and structural context

...common challenges...

DATABASE ON GENDER-RELATED PROJECTS AND COURSES

In general, it proved hard to access data on projects conducted by GARCIA project partners. In order to enable introducing gender-sensitive approach into research and teaching, structural access to the data about gender-related projects and courses is needed.

At the Catholic University of Leuven (Belgium), identification of gender-related STEM projects proved impossible, as the internal University browser did not recognise any gender-related keywords. Project colleague from the University believes that gendered contents, approaches or results probably exist, but since STEM fields rarely contain gender as part of their vocabulary, this is not visible through database research of gender-related words.

The more effective way of collecting information would enable more-systematic introduction of gender-related content, and evaluation of progress in gender mainstreaming (for explanation of what “gender mainstreaming” is, see p. 19).

At one of the test institutions – University of Lausanne (Switzerland) – Centre for Gender Studies (CEG-LIEGE) and more recently Interfaculty Gender Studies Platform (PlaGe) have been carrying out annual inventory of gender-related courses. However, it proved not completely updated, and not covering *all* courses with *some* gender topic (since it depends on responsiveness of the teaching staff). From 2015 on, PlaGe started keeping inventory of gender-related research projects.

We suggest that each of the institutions keeps a central database of gender related projects and courses carried out at the institution, which would be annually updated. This could be done within already existing offices at the institution (which collect data on approved projects and keep database of the research and teaching staff), or through already existing administrative practices of collecting data within the institution (e.g. annual performance report could contain requirement to report gender-related research/teaching).

RESOURCE ALLOCATION AND GENDER IMBALANCE OF RESEARCH AND TEACHING STAFF

STEM projects proved to be more often led by male researchers, and usually do not contain gender dimension.

STEM test department in Italy: If looking at the gender structure of the research projects conducted in the AY 2013/2014, out of 166 projects, 123 (30.3%) involved men with a permanent contracts, 190 (46.8%) men with temporary contracts, 90 (22.2%) women with temporary contracts, and only 3 (0.7%) women with permanent contracts.

Switzerland STEM test department: Out of 22 projects financed by the Swiss National Science Foundation at the department in 2013, only 6 (27%) were led by female researchers.

STEM institutions tend to obtain significantly more research funds than SSH ones.⁴ This means that distribution of money for scientific research is significantly unevenly distributed among genders.

Iceland: In 2013, at the University of Iceland, School of Engineering and Natural Sciences obtained 31 externally funded projects over EUR 50 000 (21 led by men, 10 by women). In the same year School of Social Sciences, obtained only 5 such projects (3 led by women, 2 by men). In addition, STEM projects occupy the higher end of the scale, regarding the amount of each project. Therefore, Social Sciences obtained not only fewer projects, but also less money per project.

Comparing the Netherlands STEM and SSH: In year 2013, STEM had 36 and SSH 20 projects above EUR 200 000. Among the 20 projects with the highest budget in each institution, women were project leaders of 3 projects at STEM (14%) and 7 projects at SSH (35%).

⁴ However, we note STEM projects might have higher budget also due to the more expensive equipment needed for the research than the one usually needed for a typical SSH project. Therefore, following figures are rather illustrative.

Though the ratio of female STEM students is growing (in the last decades), the ratio of female STEM professors is significantly lower.

MSc in Mathematics courses taught at the Netherlands' STEM: only one course (out of 26) is taught by a woman (together with a male professor), while there are 26% female students.

Slovenian STEM test department: MA in Agronomy

The gender structure of the course lecturers in overall favours male staff.

male Full Professors	9
female Full Professors	6
male Assistant Professors	7
female Assistant Professors	4
overall	26

In overall, 62% of the staff are men and 38% are women, which is approximately the same gender ratio among the Full Professors and Assistant Professors. The disparity is even larger if one counts teaching positions⁵ (overall 39): men occupy 67% of teaching positions, and women occupy 37%.

On the contrary, in the school year 2013/2014, 74% students were women and 26% men. Therefore, the gender rate between lecturers and students is inversely proportional.

Men are lacking in the research and teaching of gender related topics.

At Belgian SSH test institution, more than 100 researchers are working on gender related questions. The count here is established based on a list of researchers, collected for the annual report of the Catholic University of Leuven (UCL). However, this is not an exhaustive number more a general idea.

⁵ The difference between the number of academic staff (26) and teaching positions (39) is because some persons teach more than one subject.

Female lecturers⁶ working on gender-related research **45**
which is 12.9% of all female lecturers at the UCL

Male lecturers working on gender-related research **28**
which is 2.73% of all male lecturers at the UCL

Female researchers working on gender-related research **31**
which is 9.6% of all female researchers at the UCL

Male researchers working on gender-related research **4**
which is 1.4% of all male researchers at the UCL

In Swiss SSH test department, female lecturers/professors teach the vast majority (22 out of 26) of all gender-related classes (within the inventory of the PlaGe).

⁶ “Lecturers” are persons who hold full time teaching position at the UCL, but they also conduct research work aside. The “researchers” in the table, conduct solely research work.

Gender in research and curriculum

...common challenges...

GENDER MAINSTREAMING

Gender mainstreaming⁷ is a part of a larger call for transitioning to a diversity curriculum and research policies and practices. It involves a concerted effort to address explicitly the missing content from research/teaching and to shed light on these topics and their omission.

When analysing gender mainstreaming in the test institutions, it is noticeable that issue of gender is usually studied as “isolated topic” by (usually female) researchers who specialised in this specific subject. In most cases, incorporating gender into research plan or syllabus is a matter of individual initiative and enthusiasm, not an institutional strategy.

A good example of such institutional policy would be Equal Rights Policy 2013–17, adopted by the University of Iceland, which prescribes that gender needs to be incorporated where appropriate: within the course of both teaching and research, as well as within practices of operational conduct.

In most cases in the test institutions, when a project outline or a course description mentions gender, it actually refers only to women. This is very narrow approach, which simplifies notion of gender as socially constructed phenomenon, and in addition, it pushes men, transgender and queer individuals outside the research scope.

⁷ Defined as “the systematic integration of equal opportunities for women and men into the organization and its culture and into all programmes, policies and practices; into ways of seeing and doing” (*Science Policies in the European Union: Promoting Excellence through Mainstreaming Gender Equality*. A Report from the ETAN Expert Group on Women and Science. European Commission, 2000).

IACCHOS at the Catholic University of Leuven gives a share of attention to analysis of masculinities within gender-related projects. For instance, in 2013 they had 5 (out of 25) ongoing projects which devoted equal attention to men and women, while two specifically focused on men.

INTERDISCIPLINARITY

Mapping gender-related content in GARCIA test institutions proved that interdisciplinarity is usually practiced among the field of social sciences and humanities, or among various STEM disciplines – very rarely between two STEM and SSH scientific fields.

Test institutions in the Netherlands: among 20 STEM projects, only 3 are stated to be interdisciplinary: algebra and computing science; computer science, mathematics, logic and physics; quantum theory and geometry.

Almost no gender in research of STEM test departments:

- NONE: Netherlands, Belgium, Switzerland, Italy
- One STEM project had a gender component: Iceland, Slovenia

Almost no gender in curriculum of STEM test departments:

- NONE: the Netherlands, Italy, Switzerland
- Belgium: few variations of one course that probably contains gender dimension
- Slovenia: one course with a gender dimension, while for two more courses lecturers reported that the subject is vaguely related to gender (though it is not stated in the course description)

We find interdisciplinarity and dialogue between disciplines as one of the crucial means for introducing the gender content (see p. 23).

APPLICATION OF GENDER-SENSITIVE METHODOLOGY

As already noted, in STEM test institutions, there is virtually no gender mainstreaming in curricula or research content. Several of projects from test institutions focus on humans as subjects of the research yet they very rarely demonstrate gender-sensitive approach.

At STEM test department in Italy (Information Engineering and Computer Science Department) all projects conducted in 2013 were related to informatics, electronics and computing. Though many of these projects deal with topics with potential gender dimension – e.g. health technology for elderly people, informatics for different groups in need, smart cities, management of working teams etc. – there was not an explicit reference to gender in the content, methodology or output.

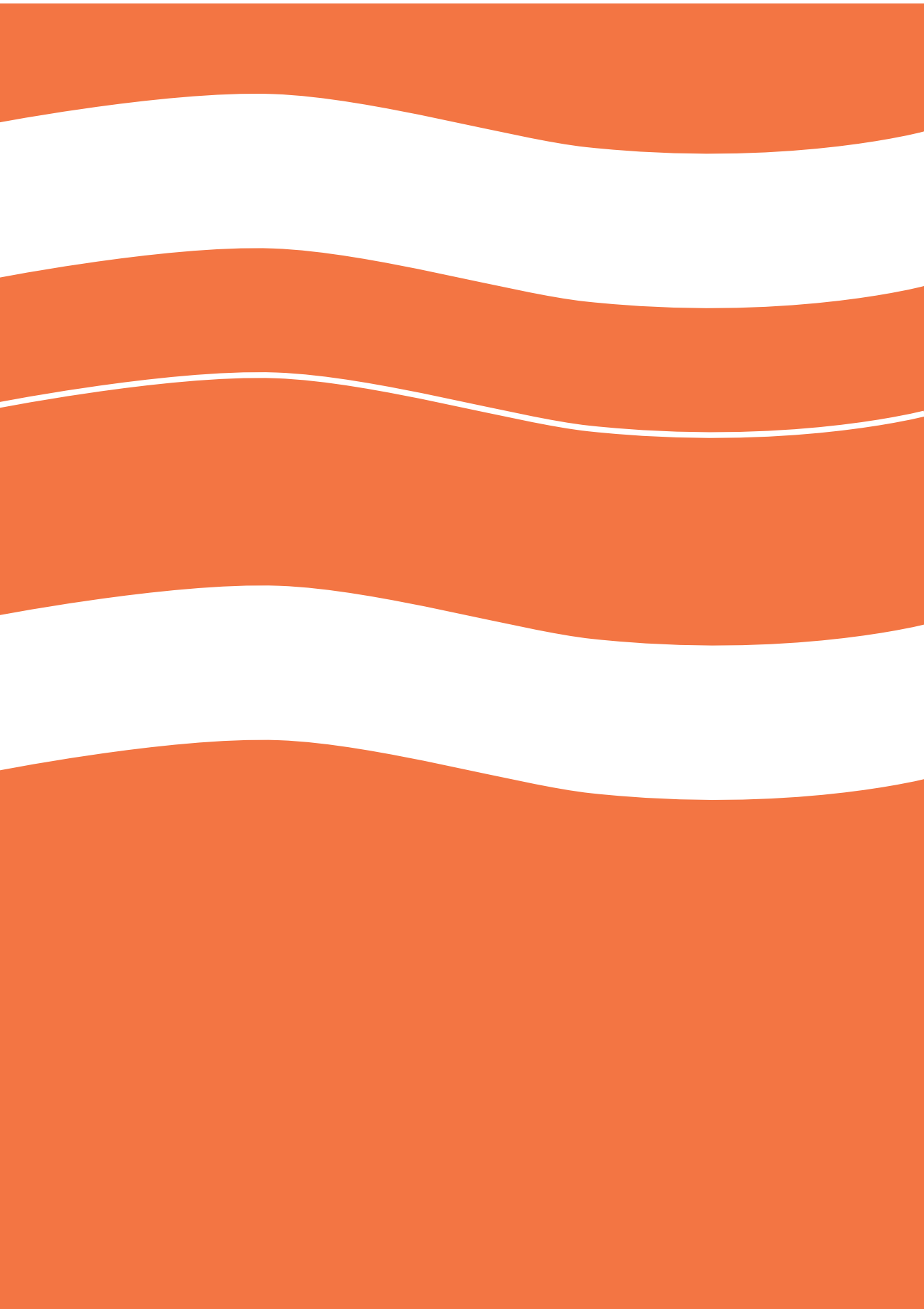
On the other hand, among the SSH institutions methodological outline may present itself as gender-sensitive, however it may turn out it either was not systematically applied throughout the project or it was applied very narrowly.

A project on disability was about understanding parents' perspective on children's disability as it sought to find qualitative validation for a previously developed explanatory model for the way in which parents of congenitally deaf children make decisions related to care.

The main researcher explained that the theoretical framework of the project had evolved from a fluid concept of deaf identity and was based on a poststructuralist approach, which means that the qualitative analysis would be sensitive to, among other things, gender issues, should they emerge. In this way, the project made use of gender-sensitive methodology. However, the principle researcher also maintained that it was difficult to say whether a focus on gender would yield any substantial findings.

Bearing in mind the substantial amount of literature on gender roles among parents with children with disabilities, the researcher's standing that the integration of gender into a project on this topic would not yield any substantial findings may point only to intentional exclusion of gender.

(paraphrasing from the report of the project partner from Iceland)



TOOLKIT OBJECTIVE

This Toolkit is devised to help GARCIA test institutions to introduce **holistic gender-sensitive approach** into research and teaching. The analysed reports from project partners noted particular common challenges and problems. This toolkit aims to fulfil existent gaps by proposing a set of specific recommendations for integrating gender-sensitive approach in research and teaching.

Reports proved the strong division between academic fields of natural sciences, technology, engineering and mathematics (STEM), on one side, and social sciences and humanities (SSH), on the other. The purpose of this Toolkit is to emphasise the importance of including gender dimension in research and teaching through **interdisciplinary approach** as one of the goals of EU innovation in research policy.⁸ Above-mentioned focus on gender as an “isolated topic” represents the main obstacle encountered by the project partners in gender mainstreaming at their institutions. Due to the fact that gender-sensitive approach has not entered all disciplines to the same extent and remained at or near the bottom rungs of the ladder particularly in STEM, stimulating interdisciplinary projects across STEM-SSH also helps in overcoming gender-segregation in particular scientific fields and disciplines – whereas certain disciplines remain “male dominated” and others get “feminised”. Interdisciplinary approach does not just enable a dialog between STEM and SSH, but also helps in increasing communication between researchers, which brings novel initiatives to science. This will also help younger (post-doctoral) researchers to get in contact with researchers from other disciplinary fields, establishing stronger and larger scientific network beyond their disciplinary framework.

Another important aspect of this Toolkit is to focus on gender through **intersectional approach**, in which gender is not isolated category of identification, but intersected with the ones of ethnicity, race, class, age, citizenship status, corporeality and so on.

⁸ See *Guidelines for Gender Equality Programmes in Sciences, PRAGES project, 2009. Structural Change in Research Institutions: Enhancing Excellence, Gender Equality and Efficiency in Research and Innovation*, European Commission (Report of the Expert Group on Structural Change), 2012.

Such approach goes beyond essentialist understanding of gender roles as fixed categories, but rather understands them as process.

In the project partners' reports it is noticeable a high emphasis on **heteronormative** approach, with prevalent understanding of gender within dichotomy women–men, without acknowledging any kind of gender transgression, transgender or third sex aspects. In line with the general principle of GARCIA project not to focus merely on women, but on dominant gender culture, and not to consider men and women as two homogeneous categories, this Toolkit proposes adoption of approach that is sensitive to a variety of gender identities. It suggests not just sex and gender as relevant viewpoints in outlining the objectives, methods and outcomes of a project, but also consideration of **transgender and transsexual** perspectives.

Bearing in mind the interdisciplinary approach described above, this Toolkit intentionally casted usual division between STEM and SSH fields in providing suggestions and examples. Since the gender-related content is best introduced through posing gender-sensitive questions during each step of developing a scientific project, or creating a curriculum, this process of systematic attention to gender dimension is relevant for all academic disciplines. Where the gender-sensitive questions vary, it is due to the extent to which a research project (or a course) analyses social structure, behaviour of human subjects or treats human as a biological objects (with an awareness that one project/course may entail all or some of these dimensions of dealing with a human being). However, the variations of these questions do not follow standard SSH–STEM division.

Although the proposed suggestions concern all project partners, they shall be implemented differently in accordance with the every particular institutional and research context.

The background of the cover features a series of horizontal, wavy stripes in a vibrant orange color, alternating with white spaces. The stripes have a fluid, undulating quality, creating a sense of movement and rhythm. The overall design is clean and modern.

RECOMMENDATIONS FOR INTRODUCING GENDER-SENSITIVE APPROACH



Introducing gender in project/teaching teams

WHO?

...in a research project

The lack of recognition of the relevance of gender in research and teaching is closely related to the underrepresentation of women at all levels of academic and scientific careers (particularly on the highest positions). Because of that, this Toolkit proposes integration of gender-sensitive approach as going hand in hand with a better inclusion of women in research and teaching. Participatory research/teaching environment, with an emphasis on gender balance, proves to be much more successful in comparison to research teams where women and men are highly segregated or have different segregated roles in the research team acquiring different kind of knowledge.

- Is your team diverse enough? (diversity as understood in intersectional sense, that is, in the sense of ethnicity, race, mother tongue, class and gender of the research staff)
- Have you noticed pattern of hierarchical gendered relations in your team? (for instance, Senior Researchers tend to be men, and Junior Research Fellows – who are less paid, and have less control over the research agenda – tend to be women)
- Do you have a male academic, who is researching/teaching a gender-related topic?
- Are the working conditions within the project (e.g. working hours and tasks) shaped in the way that accommodates men and women equally?
- If there is a great gender imbalance in your research/teaching group, how do you encourage minority gender to apply for a new position?

...in a classroom

Diversity among members of staff sends positive signals to students. For instance, in male dominated disciplines, female researchers may act as role models for potential future female researchers and professionals.

- Have you reflected on how many female/male academics you invite for a visiting lecture during your course?
- Have you considered inviting visiting lecturer renown for her/his gender-sensitive approach? Such a person could bring a gender perspective you might lack in your course.
- Do you attract students of different genders to take your course?

Example:

A student guidebook mentions gender stereotypes in order to invite girls to enrol the Computer Science courses. Indeed, when the guidebook provides information about the skills and the competences required, it deconstructs, with a smart language, the two main stereotypes about Information Engineering and Computer Sciences scholars: firstly, that “it is only for geeks” and, secondly, the that “it is only for boys”. Notably, this is the only section where the text addresses both genders in a direct and informal way (“Dear boys and girls...”), while in the rest of the document the gender used to refer to scholars and teachers is always (supposedly neutral) male.

(from STEM test institution, Italy)

- Where possible, stimulate students to work in gender-mixed groups.

Introducing gender content

Step 1: How to design gender-sensitive research/curriculum content?

WHY?

Identification of the RESEARCH PROBLEM and formulating gender-sensitive RESEARCH QUESTIONS

RESEARCH

- Did you have both men and women in mind when you formulated the research question?
- When identifying a research problem, think how men and women differently relate to that problem.

Example:

An agronomy research project deals with trends in development of small-scale farming in Slovenia (e.g. changing economic situation in Europe, opting for bio/eco-farming etc.). Integrating gender into such project poses questions on how changes in social position of women (socio-political emancipation) influenced traditional decision making within farming family. Do female farm-owners behave differently to male ones?

(a project from STEM test institution, Slovenia)

- If your project deals with structural issues of a society (e.g. decision- and policy-making) think in what ways position of men and women differ in the society. Are women equal to men in all spheres of political system? Are they equally represented in decision-making bodies? What is division of ownership of relevant resources (land, income, property) among genders?

- If your project tackles private life of individuals, think how women experience life situations differently from men. When analysing individuals' behaviour (e.g. career decisions, consumption patterns, voting behaviour, parenting) be aware of different challenges women and men face. Are they influenced by the dominant gender roles in society? Does society put different expectations before men and women, and do these expectations influence behaviour you analyse?

Example:

Every project that deals with family life should take into account division of domestic work between partners and their participation in parenting. It should be sensitive to existing inequality of the amount of work that women conduct compared to men (e.g. taking care of the household, children and elderly). It should be sensitive to the existing norms and expectations (e.g. what is considered to be "a good mother") in the given social setting, but should not take them as given, unchanging or "natural". A good example of such a project research: "Migration and paternity: evolution of family models among the descendants of the Maghreb immigrants in the immigrant surrounding. The case of young Belgian fathers of Moroccan descent."

(a project from SSH test institution, Belgium)

- When identifying a research problem, think in what ways are male and female bodies different.
- When compiling a list of references (literature review) for your research, look for gender-sensitive literature and research projects conducted in your field, or think in which spheres they lack.

CURRICULUM



- Do you contemplate how will your students, as future professionals, encounter gender issues in the course of their professional work? Will they be sensitive to different needs that women and men might have as their customers/patients/pupils or users of products your students will once make as professionals?
- Think how your teaching could inspire future scholars to conduct more gender-sensitive research in your discipline.

Example:

Course on nuclear physics includes biological effects of radiation, and nuclear medicine.

Turning this course into a gender-sensitive one would subsume inclusion of sex differences into the course. What possible different effect could radiation have on women and men?

(suggestion from the report of the project partner from the Netherlands)

- Include in the course reader publications that take gender-sensitive approach.
- Devote at least one class to gender dimension of the course's main topic.

Example:

A course titled *Theories in International Relations*, while providing a good all-round theoretical basis for the topic, treats gender as a naturally integral part of international relations. Thus, the eighth week of the course was about how gender and gender identity were important factors to consider in a still more globalised world.

(SSH test institution, Iceland)

- Include gender aspect as a requirement for seminar works and student projects.

DETECTING GENDER STEREOTYPES, INEQUALITIES, GENDER BIASES

RESEARCH

- If you are considering gender differences in your research, have you asked yourself if you are maybe projecting stereotypical roles onto how women and men would behave, what they need and desire?

Example:

A project analyses literature on love, passion and the symbol of seductive woman, since antique to modern literature. It seems to reproduce traditional hetero-normative roles, by focusing on “literature tropes of longing, weakness and temptation” and “folk ballades about kidnapped woman/mother common to European Mediterranean region” (Project Outline).

However, the project does not mention critical reading of the historical understandings of gender roles.

(SSH test institution, Slovenia)

- Now think again. Are there any hidden aspects involving gender roles and stereotypes in your research questions and objectives?

CURRICULUM

- How do you make your students more aware about gender stereotypes connected to the field you teach?
- Are they aware of gender inequalities they will face one day as professionals? If you are teaching for a male-dominated profession, have you considered how your female students feel about professional scene they are entering? And vice versa.

Example:

A course *Professional Preparation* at a STEM institution prepares students for the transition from being a student to a physicist or astronomer on the job. It could benefit from raising awareness about gender stereotypes in recruitment and selection procedures for this kind of jobs.

(STEM test institution, the Netherlands)

Step 2: How to apply a gender-sensitive theoretical/methodological structure?

HOW?

GENDER-SENSITIVE METHODOLOGY

RESEARCH

- Research that does not apply gender-sensitive approach may draw general conclusion based on partial data. For example, if we want to understand certain societal processes, we should include both male and female points of view. If we want to research some medical phenomenon, we should select both female and male patients.
- Do you have male and female specimen in your research sample?

Example:

A female biologist was working on the reproductive behaviour of a particular species of butterflies. While conducting literature review, she noticed that previous studies recorded the male butterfly behaviour as being decisive for the reproductive habits or frequencies. However, while conducting her own experiments, she realised that the average size of the female butterfly was much larger than the male one, and that the environment of the experiment mattered as to how free in space the female butterflies were in order to increase reproductive behaviour. In fact, she determined that there was a bias in butterfly research in terms of the male butterfly predominance in determining reproductive behaviour in most literature, written majorly by male researchers.

(interview with a female academic at STEM test institution, Belgium)

- If you are producing new, original methodology, think how you could integrate gender into it.

Example:

A project focused on rethinking the concept of Contradiction and Convergence (the current international strategy for bringing down global emissions of greenhouse gases to a safe level). It developed both the philosophy and the tools for implementing what it calls “Convergent Globalisation”, which is to support “processes and structures towards the emergence of equity across and within all nations and generations, while remaining within the capacity of the planet” (Final Report Summary).

The project emphasises the importance of transdisciplinary and participatory research on sustainability, which “involves key concerns of gender and diversity in empowering different perspectives to be voiced” (Ibid.). In other words, the natural and social sciences intertwine in this project and gender is duly recognised as an important factor in climate change policies.

(STEM test institution, Iceland)

- If you are conducting surveys in your research, or disseminating questionnaires, design your questions so they are relevant to both women and men.
- Are you using gender-sensitive **language** in your project outline? In most European languages, plural masculine form is often used to refer to both men and women – when referring to unknown individuals, officials’ titles, names of the profession etc. Use of feminine form, or interchanging masculine and feminine ones, makes women more visible in both life and science. Even more, using feminine forms may remind you of the potential gender dimension in your research, which you might have overseen.
- If part of your project is conducting visual analysis, think how images could reproduce certain stereotypes about gender roles.

CURRICULUM



- Do you teach students gender-sensitive methodology?
- Do you use gender-sensitive language while teaching and writing course materials?
- Do you use visual material in gender-sensitive way?

DISAGGREGATE DATA BY SEX AND ANALYSE DATA IN GENDER-SENSITIVE WAY

RESEARCH

- When collecting data, disaggregate it by sex. Intersect your data with gender.

Example:

A project analyses pattern of small farm ownership, clustering data by the size of the farming land, type of the crop and cattle production, orientation towards bio/eco/integrated or industrial farming. A gender-sensitive approach would collect data on gender of the farm owners and intersect it with the rest of the data variables.

(suggestion from the report of the project partner from Slovenia)

- Especially when conducting population polls, ensure you obtain proportional gender ratio. If you organise focus groups, provide equal number of men and women in the sample. Interview equally men and women.
- When conducting laboratory or medical experiments, always report sex of the cells, tissues, animals or subjects you are using. If you are using one sex only, justify why, and note limitations in your discussion.
- If you are using statistical or other data collected by public bodies, divide them by sex and analyse them with gender dimension in mind.
- If you are conducting policy analysis, be aware of gender ratio in decision-making bodies.

CURRICULUM

- Exercise gender-sensitive methodology with students by tasking them to take a previously existing study and adjust it so it would provide gender-sensitive data.

Step 3: How to produce gender-sensitive outcomes?

WHO WILL BENEFIT?

GENDER-SENSITIVE RESULTS

RESEARCH

- Do you report data in gender-sensitive way?
- If the result of your project is a policy recommendation, do you think about your outcomes through equal opportunity of men and women?
- Have you checked if your publication/exhibition presents images of different genders? Have you considered if these images maybe reproduce stereotypical gender roles?

CURRICULUM

- If you are creating a Handbook for your course, include gender dimension of the course topic by enriching the content of the course, providing gender-sensitive learning points, including female authors in course reading.
- You are probably issuing evaluation forms to your students at the end of the course. Such questionnaires usually ask students to evaluate the ability of lecturers/professors to transfer knowledge – e.g. how well they explain theories and concepts, how engaging they are in their teaching, how well mentors they are etc. Consider posing question on the issue to what extent is the course gender-sensitive and/or to what extent is the lecturer/professor gender-sensitive in their teaching.

GENDER-SENSITIVE IDENTIFICATION OF USERS/BENEFICIARIES

RESEARCH

- Have you considered how could people of different genders use the project results in different ways?
- If you are conducting a medical research, think how it improves lives of both men and women. Have you considered transsexual subjects?

Example:

An academic from bioengineering field notes how ovarian cancer research can be highly gendered in its objectives. For instance, the measures for treating ovarian cancer in females are largely focused around eradicating the cancer, with little focus or regard to the reproductive functions and implications for the women in question. She explains that this is a masculine model of treatment, as it deals with elimination of the illness or cancer, rather than a more holistic treatment, giving due regard to fertility and life quality of the women with the cancer.

(interview with female academic from test STEM institution, Belgium)

- If the outcome of your project is a new/improved product or technology, think how it will be used by both women and men, how it will benefit lives of both women and men.
- In what ways does your research relate to gender inequalities in the society?

Example:

An interdisciplinary project focused on creating a Responsive Fisheries Management System (RFMS) with the potential to change radically approaches to fisheries management in a way that reallocated responsibility in fisheries away from centralised government onto fishers themselves (Report Summary). While trying to introduce more democracy in decision-making process, the project ignores the fact that large majority of fishermen are men, while small percentage of jobs is occupied by women, most of whom work in the processing on the land. The democratic decentralisation outcome of the RFMS should give fishers more responsibility for managing their own activities, not the people processing fish on land (i.e. women). In this way, even though the project (which was fittingly named *ECOFISHMAN*) had an admirable democratic approach, the exclusion of gender as a central component more or less ignored women as a target group.

(analysis of a joint STEM/SSH project conducted in Iceland)

CURRICULUM

- Maybe your University gathers data on career paths of former students (e.g. sector/field/type of employment, time needed to acquire a steady job, longitudinal surveys three/five/ten years after graduation etc.). Maybe you are gathering such data specifically for your Department. If so, consider disaggregating data by sex. Make gendered analysis of already compiled data.
- Some Universities provide short “success stories” of their former graduates on the University web page. If so, pay attention that you present stories of both female and male former students.

Example:

A *Life Science Career Day* was held at the Faculty of Biology and Medicine, aimed at MA, PhD and postdoctoral students in order to inform them about career options in various life science sectors, both inside and outside academia. The audience of the event was gender-balanced. The plenary speaker at the opening session was a man (as was the chair). He illustrated his talk with PowerPoint slides, 8 of which included cartoons with 18 men pictured and not a single woman. He also presented slides with statements all written in the masculine gender. There was a thus strong suggestion that careers in the life sciences were associated with masculinity and maleness.

(event at STEM test institution, Switzerland)

RESISTANCE

Problem of starting a transition toward including gender in STEM research and teaching stumbles at the very beginning due to lack of vocabulary: a project colleague who works at the STEM test institution in Belgium stated that “gender is simply not in the STEM working vocabulary”.

There is a tendency among the academics from natural sciences to nurture a reserve towards the question of gender mainstreaming. For instance, while the colleagues from the project partner in Iceland compiled data about curriculum from the Department of Physical Sciences, a natural science lecturers “saw no reason to send [his course syllabus] to evaluation in other countries” and decided not to share these information with social sciences colleagues involved in the GARCIA project. Another example comes from Slovenian project partner: 32 course teachers at the STEM test institution were invited to answer a simple web survey (three questions with yes/no answers) on the presence of gender content in their curriculum. Only 15 (less than half) answered. It could mean that there is an underlying suspicion towards gendered inquiries among natural science academics.

We do not assume that gender should be necessary part of *every* scientific endeavour. Instead, gender dimension should be considered in research and teaching wherever appropriate.


Disclaimer:

“No one can be expected to integrate gender into the electromagnetic spectrum.”

(quote from Iceland report)

Therefore, in our analysis we make a distinction between cases when gender is simply *not featured* and those when gender is *excluded*. That gender is not featured means that the given subject matter of a particular project or course does not have an obvious gender component or that the average teacher cannot be faulted for not featuring gender because the connection between gender and the given subject matter is not immediately obvious or simply does not exist.

However, when gender is excluded, it denotes a conscious or subconscious (or habitual) choice on behalf of a given teacher or researcher to exclude gender as a topic in a context where gender is obviously relevant.





CHECKLIST

For applying gender-sensitive approach

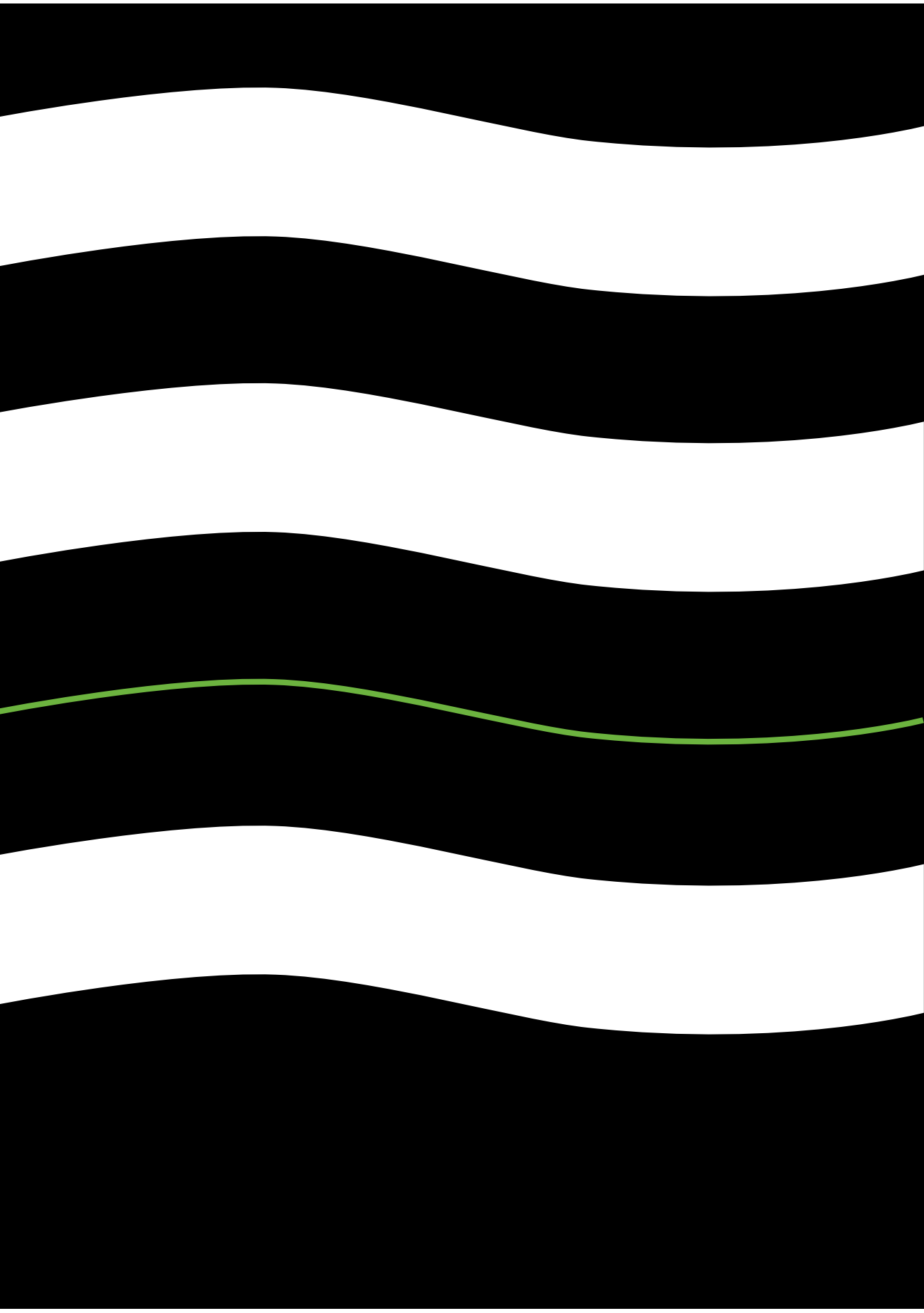
in RESEARCH:

- Are you considering increasing diversity of your project team?
- Are you deterring hierarchical gendered relations in your team?
- Are you discouraging gender segregation in your team?
- Are the working conditions within the project shaped in the way that accommodates men and women equally?
- Did you have both men and women in mind when you formulated the research question?
- Have you checked if men and women are differently related to the research problem you want to deal with?
- Have you looked for gender-sensitive studies while preparing literature review for your research?
- Have you checked if you are projecting stereotypical gender roles?
- Do you have male and female specimen in your research sample?
- Is your methodology tackling the issues relevant to both women and men?
- Is the language you are using gender-sensitive?
- Do you disaggregate data by sex?
- Do you have equal number of both sexes/genders in your sample?
- Do you report data in gender-sensitive way?
- Have you checked how will different genders use the project results in different ways?
- Will project results benefit lives of both women and men?
- Does your research relate to gender inequalities in the society?

For applying gender-sensitive approach

in CURRICULUM:

- Are you inviting a balanced number of female and male academics for a visiting lecture at your course?
- Have you invited a visiting lecturer renowned for his/her gender-sensitivity?
- Do you attract students of both genders to take your course?
- Are you stimulating students to work in gender-mixed groups?
- Do you prepare your students to be gender-sensitive professionals one day?
- Have you included in the course reader gender-sensitive publications?
- Have you devoted at least one class to gender dimension of the course topic?
- Do you make your students more aware about gender stereotypes connected to the field you teach?
- Do you make your students aware about gender inequalities they will face one day as professionals?
- Do you teach students gender-sensitive methodology?
- Do you use gender-sensitive language and visual materials while teaching and writing course materials?
- Does your Handbook contain gender dimension of the course topic?



Appendix 1: Existing toolkits

- **Toolkit Gender in EU-funded Research**
(European Commission, 2011)
This Toolkit focuses on how to make a research gender-sensitive in the setting of the EU-funded projects. It provides suggestions for disciplinary fields: health; food, agriculture and biotechnology; nanoscience, materials and new production technologies; energy; environment; transport; socio-economic sciences and humanities.
- **Gender Equality Policies in Public Research**
(European Commission, 2014)
- **Structural Change in Research Institutions: Enhancing Excellence, Gender Equality and Efficiency in Research and Innovation**
(European Commission, 2012)
- **Gender & Qualitative Interpretation of Data**
(Swiss Agency for Development and Cooperation, 2006)
For fields: poverty, employment, political participation and power of decision-making, health and wellbeing, education.
- **Tool Kit on Gender Equality Results and Indicators**
(Asian Development Bank, 2013)

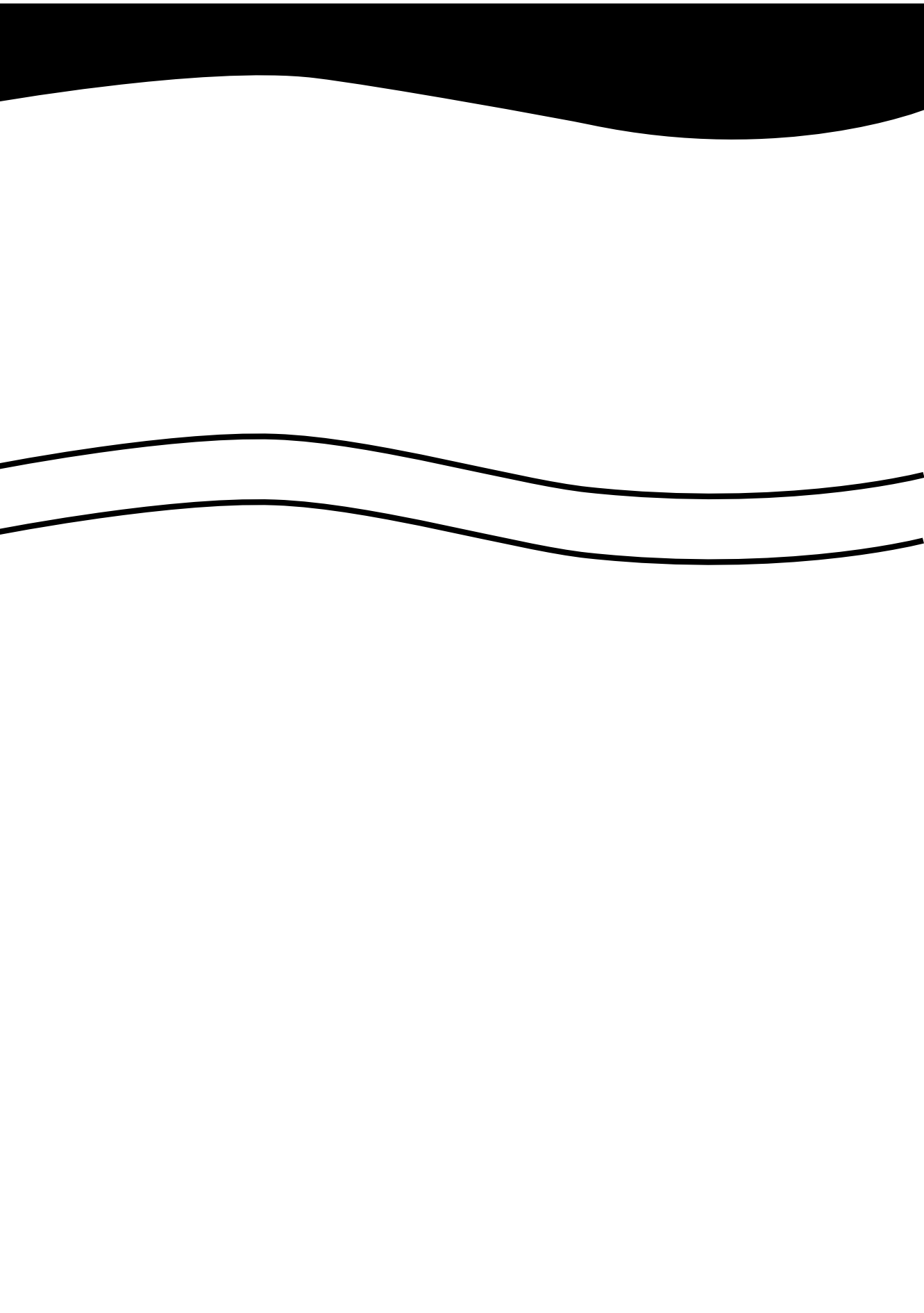
- **Gender Analysis Toolkit**
(Queensland Government)
Applicable to policy analysis.
- **Gender Toolkit for International Finance-Watchers**
(Gender Action, 2009)
- **Portraying Politics: A Toolkit on Gender and Television**
(Portraying Politics project, 2006)
Created chiefly for journalists and editors, this toolkit could be also useful to media studies researchers/teachers.
- **Gender-sensitive perspective of the role of the media in violent conflict**
(INFOCORE project, 2014)

- **Gender Mainstreaming in Health: A Practical Guide**
(Pan American Health Organization)
- **A to Z Guide: Sex and Gender Influences on Health**
(National Institute of Health, USA)
- **Manual to Evaluate Quality of Care From a Gender Perspective**
(International Planned Parenthood Federation, 2000)
- **Putting Women First: Ethical and Safety Recommendations for Research on Domestic Violence Against Women**
(World Health Organization, 2001)
- **Researching Violence Against Women: A Practical Guide for Researchers and Activists**
(World Health Organization and Program for Appropriate Technology in Health, 2005)
- **Better Practices in Gender Sensitivity: Tool for Family Planning / Reproductive Health Curricula**
(IntraHealth International/PRIME II, 2003)
- **A Manual Integrating Gender into Reproductive Health and HIV Programs: From Commitment to Action**
(USAID, 2009)

- **Gender in Agriculture Sourcebook**
(World Bank, 2009)
Very comprehensive, covering following topics: food security, rural finance, land policy and administration, agricultural markets, water management, innovation and education, agricultural labour, rural infrastructure, resource management, crop, fisheries, livestock, forestry.
- **Gender and Inclusion Toolbox: Participatory Research in Climate Change and Agriculture**
(CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS), CARE International and the World Agroforestry Centre (ICRAF), 2014)
- **Integrating Gender into Forestry Research**
(Center for International Forestry Research, 2012)

- **Guidelines for Gender Mainstreaming in Science and Technology**
(UNESCO, 2004)
- **Gender Indicators in Science, Engineering and Technology: An Information Toolkit**
(UNESCO, 2007)

Appendix 2: Map of existing research and curricula using gender perspective within GARCIA project partners

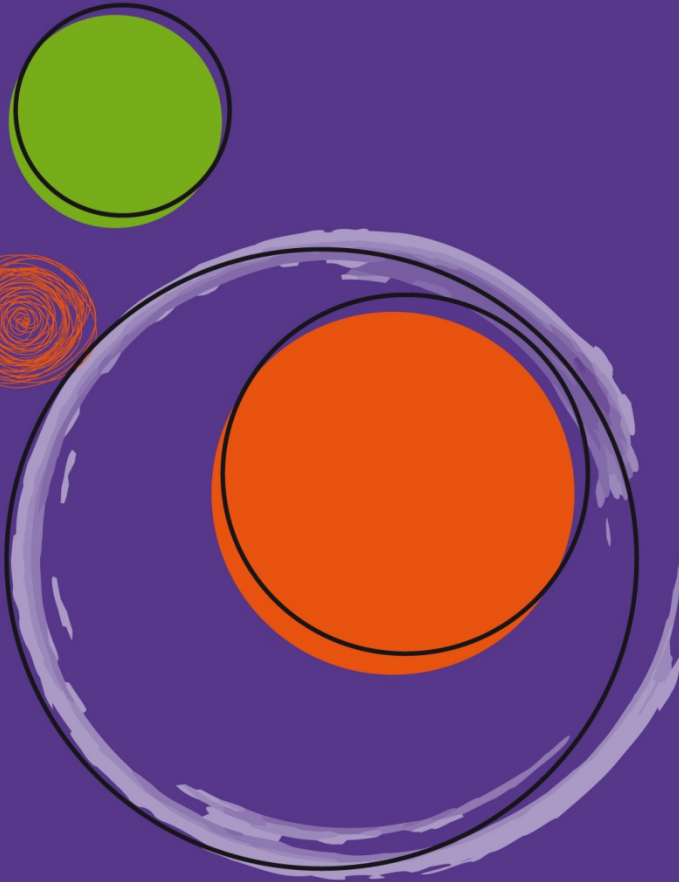


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