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## **Gender Equality in Science – Equal Opportunities and Special Measures in Legal Regulations**

The text focuses on researching the sources that define public policies and those that form the legal framework within which there are (or are not) equal opportunities for women and men to exercise their rights under equal conditions, including the right to engage in scientific work. Documents (strategies and action plans) in the fields of education, science, gender equality and non-discrimination are the subject of attention. The research is also supported by legal regulations that positivise public policies through binding norms, which include international legal sources containing human rights and gender equality standards in the field of scientific work, as well as domestic legislation (Constitution and laws). The Constitution of the Republic of Serbia in its basic principles guarantees the equality of women and men and obliges the state to pursue a policy of equal opportunities and take special measures in order to achieve in practice the gender equality proclaimed by the Constitution. Our question is whether the state fulfils this constitutional obligation, whether it pursues a policy of equal opportunities in the field of science, whether it takes special measures as instruments for conducting a policy of equal opportunities, whether any special measures which are undertaken are sufficient and what effect they have.

*Key words:* gender equality, equal opportunities, special measures, gender-based discrimination, women scientists

## **Родна равноправност у науци – једнаке могућности и посебне мере у правним прописима**

Текст је фокусиран на истраживање извора који дефинишу јавне политике и на оне који чине правни оквир унутар кога постоје (или не постоје) једнаке могућности за жене и мушкарце да остваре своја права под једнаким условима, укључујући и право да се баве научним радом. Предмет пажње су документи (стратегије и акциони планови) у областима образовања, науке, родне равноправности и забране дискриминације. Ослонац за истраживање су и правни прописи којима се јавне политике позитивирају обавезујућим нормама, који укључују међународне правне изворе који садрже стандарде људских права и стандарде родне равноправности у области научног рада, као и прописе унутрашњег права (Устав и закони). Устав Републике Србије у основним начелима гарантује равноправност жена и мушкараца и обавезује државу да води политику једнаких могућности и предузима посебне мере како би се и у пракси постигла уставом прокламована родна равноправност. Наша су питања да ли држава испуњава ову уставну обавезу, да ли води политику једнаких

могућности и у области науке, да ли предузима посебне мере као инструменте вођења политике једнаких могућности, да ли су посебне мере које се предузимају довољне и какви су њихови ефекти.

*Кључне речи:* родна равноправност, једнаке могућности, посебне мере, родно заснована дискриминација, научнице

The subject of the research is the sources that shape public policies and the legal framework within which equal opportunities for women and men to exercise their rights, including the right to engage in scientific work under equal conditions and without any discrimination do (or do not) exist. The research relies on international and national strategic documents and legal sources.

We have singled out universal and regional international documents related to higher education, science and gender equality. International conventions on human rights, which are subject to ratification and then become part of domestic law, are analysed, along with international strategic documents (declarations, resolutions, etc.) that define public policies, strategies and action plans for their implementation.

## 1. Universal international documents

The research relies on several key documents that set universal standards for women's human rights, including the prohibition of discrimination against women on the basis of education and several important documents that regulate the fields of education, especially higher education and science.

The *Convention on the Elimination of All Forms of Discrimination against Women* (1981) establishes as an initial obligation that the States Parties to the Convention “pursue by all appropriate means and without delay a policy of eliminating discrimination against women” and to this end: adopt appropriate laws and statutes or other measures to ensure the practical application of the principle of equality between women and men; prohibit and sanction discrimination against women and refrain from any act or practice of discrimination against women and ensure that public authorities and institutions act in accordance with this obligation (Article 2, paragraph 1).

In addition to the principled approach to gender equality and the obligation of the state to prevent, eliminate and sanction any form of discrimination against women in society, the Convention also regulates the obligation of states to adopt special measures (Article 3) aimed at “accelerating de facto equality between men and women”, emphasising that these measures “shall not be considered discrimination” and pointing to the nature of these measures, which are temporary in nature and “shall be discontinued when the objectives of equality of opportunity and treatment have been achieved” (Article 4).

Among the areas identified as particularly important for achieving gender equality, the Convention does not explicitly mention science, but gender equality standards in education (equal conditions in access to all levels of education; vocational and career guidance; the elimination of any stereotyped concept of the roles of men and women at all levels of education; equal opportunities to be awarded scholarships, etc. [Article 10]), as well as in the sphere of work (free choice of profession and employment; equal employment opportunities; equal criteria for selection of candidates; equal opportunities for advancement and promotion; equal pay for work of equal value, etc. [Article 11]), can certainly be applied in science.

The *Convention against Discrimination in Education*, adopted by the General Conference of UNESCO at its eleventh session (Paris, 14 December 1960), develops from the *Universal Declaration of Human Rights* (1948), which guarantees everyone, without discrimination, in any individual capacity, including gender (Article 2), the right to education “directed to the full development of the human personality and to the strengthening of respect for human rights and fundamental freedoms” (Article 26).

The *World Declaration on Higher Education in the 21st Century* was adopted at the 1998 UNESCO World Conference in Paris (UNESCO 1998). The Declaration explicitly prohibits gender-based discrimination (Priority I, item 1) in higher education and, among the recommendations, as one of the priority activities at the national level, is the establishment of an institutional and normative framework for the development of higher education that will eliminate social, economic, cultural, political and other obstacles that cause the gender gap in this area, increase the participation of women in science and promote their role in this area (Article 4, point a).

The World Conference on Higher Education, held 5–8 July 2009 in Paris (UNESCO 2010), draws particular attention to the role and position of women in higher education, and emphasises the proactive measures (special measures) of governments and other support institutions for women in science, such as research aimed at understanding the state of gender equality in science, curricula, scientific research programmes, women in management positions in scientific institutions, etc.<sup>1</sup> The importance of strategic planning in higher education and scientific work and an approach to higher education and science based on the principles of equality (non-discrimination and equal opportunities) and quality are highlighted.<sup>2</sup>

*The Right to Education* (Daudet & Singh 2001), is a document on the standards and instruments of public policies and strategies in education, which starts from the principle of equal opportunities in education for all and emphasises the obligations of states to integrate this principle into public policies and legislation and adopt special measures to remove obstacles to the right to education and

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<sup>1</sup> Item 3.4.2 of the UNESCO *Final Report on Activities and Measures in the Field of Higher Education* (UNESCO 2010, 29–30).

<sup>2</sup> Items 7 to 23 of the Recommendations contained in the Final Document of the UNESCO *Final Report on Activities and Measures in the Field of Higher Education* (UNESCO 2010, 49–50).

establish equal opportunities for the effective enjoyment of this right without any form of gender-based discrimination.

## 2. Regional international documents

The analysis is based on European documents on gender equality, science and research.<sup>3</sup> These documents create a favourable normative environment (policies, strategies, action plans, but also binding directives) for achieving gender equality.<sup>4</sup> Despite this, there is a visible gender gap in science, so special measures are needed to overcome it. European research policies, focused on three main goals (gender equality in scientific careers, gender balance in decision-making, and integration of the gender dimension into research content) are implemented through Horizon 2020 and the European Research Area, through which cooperation between countries and scientific institutions is enabled.<sup>5</sup> The European Commission promoted gender equality in research as part of all European strategies and policies for the period 2016–2019. These are some examples of important documents:

- Gender equality is included in the basic documents of Horizon 2020, and the goals supported by the programme are related to: 1) Gender balance in decision making (The Commission sets a quota of 40% of the underrepresented gender in expert groups and evaluation commissions, and the Advisory Group for Horizon 2020 a quota of 50%). 2) Gender balance in research teams at all levels, as well as at the management and supervisory level, which is obligatory for the beneficiaries of project funding, can be taken into account as an advantage when ranking proposals that have the same results. 3) Integrating the gender dimension into the content of research, which presupposes respect for and inclusion of biological and social characteristics of both women and men, their needs and interests in scientific research in various fields. Inclusion of gender equality in calls for proposals for research projects under Horizon 2020.<sup>6</sup>

- *Council Conclusions on Advancing Gender Equality in the European Research Area* (adopted on 1 December 2015 by the European Commission), which emphasise social and institutional changes aimed at eliminating gender imbalances and ensuring gender equality by taking special measures regarding scientific institutions and decision-making bodies. Among the precisely defined goals that are to be

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<sup>3</sup> For example: *Science with and for Society* (adopted in 2015 by the European Commission) and the *Council of Europe Gender Equality Strategy 2018–2023*. European documents on gender equality in science can also be found on the websites EPWS, #ACTonGender, European Commission /Policy, Gender Equality 2019, and others.

<sup>4</sup> For example: *Council Resolution on Women and Science*, 1999; *Women and Science: Networking the Networks – Declaration of Networks Active in Europe*, 1999; *Council Resolution on Science and Society and Women in Science* 2001; *Science and Society Action Plan* 2001, etc.

<sup>5</sup> Horizon 2020 is the largest budget programme of the EU intended for scientific research (period 2014–2020). See more about the programme as well as gender policies on the website Horizon 2020 and the European Commission / Policy, Gender Equality 2019.

<sup>6</sup> See European Commission / Policy, Gender Equality 2019.

achieved are gender balance among full professors, gender equality in decision-making bodies for science, and the integration of a gender perspective into scientific research. For this purpose during 2016, instruments (national strategies and action plans) for the promotion of gender equality in science were developed. The European Commission which, through the Science and Society work programme, funds activities for the development of plans for gender equality, because these are important instruments for institutional change and achieving gender equality in science.<sup>7</sup> As a kind of support for the realisation of the goals set, a Platform<sup>8</sup> for the discussion and exchange of the knowledge of various actors who work in science, inter alia, the promotion of gender equality in this field, was created, and the funds of the European Network of Research Spaces intended for the promotion of gender equality in research and innovation were made available.<sup>9</sup> Support for these processes also provides gender-sensitive statistics in the field of research and scientific work (European Commission 2016).

- *Helsinki Call for Action* (2019),<sup>10</sup> the last in a series of documents, contains recommendations for the promotion of gender equality in science and especially emphasises three goals: gender balance in research teams; gender balance in decision-making; a gender dimension in research content. Gender equality in science, research and innovation is seen as a development issue because it “contributes vitally to achieving other European policy priorities, including the European Green Deal, the Digital Age and European Democracy”.<sup>11</sup> On this basis, specific recommendations are based on: 1) structural policy changes to promote inclusive gender equality in science (quotas, funding, prizes, adequate resources for these actions); 2) embedding gender equality and gender mainstreaming in the core of the European Research Area; 3) integration of the gender dimension in research; 4) gender-specific research and policy-oriented actions for gender equality in science; 5) the provision of conditions for scientific work that contributes to gender equality (harmonisation of professional and family life); 6) equal pay for work of equal value; 7) the adoption of policies and strategies to combat gender-based violence and harassment in higher education and scientific institutions and taking measures to protect researchers, especially in the early career stages; 8) the improvement of gender

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<sup>7</sup> The Directorate General for Research and Innovation, in cooperation with the European Institute for Gender Equality, has developed an instrument for working on the preparation of action plans for achieving gender equality in scientific and research institutions (European Commission / Policy, Gender Equality 2019).

<sup>8</sup> The platform brings together the European Association of Research and Technology Organisations (EARTO), the European University Association (EUA), the League of European Research Universities (LERU), Scientific Europe, the Conference of European Schools for Advanced Engineering Education and Research (CESAER) and the EU - Life. See ERA Portal Austria 2015.

<sup>9</sup> See the GENDER NET Plus website (project launched in September 2017; will run until 2022) as well as the website of European Commission / Policy, Gender Equality 2019.

<sup>10</sup> Strategic document adopted on 1 November, 2019 by the standing working group of the European Committee for Research and Innovation, on the occasion of the 20th anniversary of the adoption of the first document of the European Commission on women in science.

<sup>11</sup> Paragraph 4 of the preamble to the Helsinki Document.

equality, which especially refers to: instruments (regularly updated plans, gender sensitive statistics, etc.), institutions (gender equality boards, equality ombudsman, etc.), knowledge and skills (training on gender equality and gender bias, including intersectional aspects, expertise, etc.), participation in decision-making (representation in decision-making positions and in management positions, etc.); 9) the inclusion of gender equality in scientific research funding (gender balance in funding decision-making bodies and scientific evaluation panels, the gender dimension in research content, etc.); 10) overcoming the uneven implementation of gender equality measures to strengthen gender equality in states (building valid data and indicators of gender equality in order to measure progress); 11) social responsibility and a proactive approach to gender equality in the business sector and the adoption of measures to foster structural change that take into account the talents, needs and experiences of women.

### 3. Gender equality in science – legislation and strategies in Serbia

The normative framework of the right to gender equality in Serbia is the *Constitution of the Republic of Serbia* (2006),<sup>12</sup> in conjunction with anti-discrimination legislation – the *Prohibition of Discrimination Act* (2009) and the *Gender Equality Act* (2009) – also the statutes that regulate science – the *Science and Research Act* (2019) – and further subsidiary statutes important for achieving gender equality in science – e.g. the *Higher Education Act*, the *Budget System Act*. Strategies and action plans are also relevant for achieving gender equality in science: *Strategy of Scientific and Technological Development* (2016–2020), the *Action Plan* for its implementation,<sup>13</sup> *National Strategy for Gender Equality* (2016–2020) and *Action Plan* for its implementation (2016–2018). We point out in brief the relevant determinants in the documents related to gender equality and scientific work.

The *Prohibition of Discrimination Act* and the *Gender Equality Act* in principle regulate the prohibition of and protection against gender-based discrimination, as well as protecting gender equality. Neither of these Acts explicitly regulates gender equality in science, although both set the legislative framework relevant for its achievement.

The *Prohibition of Discrimination Act* regulates discrimination on the grounds of sex as a special form of discrimination and “the case of conduct contrary to the principle of the equality of the genders; that is to say, the principle of observing the equal rights and freedoms of women and men in the political, economic, cultural and other aspects of public, professional, private and family life.” (Article 20, paragraph 1). This Act explicitly forbids anyone to “deny rights or to grant privileges, be it publicly or covertly, pertaining to gender or gender change” (Article 20,

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<sup>12</sup> More about the constitutional framework of gender equality in Pajvančić 2010.

<sup>13</sup> As stated on 28 November, 2019, on the website [otvorenavlada.rs](http://otvorenavlada.rs), it was adopted at a Government session on 30 July, 2018.

paragraph 2); furthermore “it is forbidden to inflict physical violence, exploitation, express hatred, disparagement, blackmail and harassment pertaining to gender, as well as to publicly advocate, support and practise conduct in keeping with prejudices, customs and other social models of behaviour based on the idea of gender inferiority or superiority; that is, the stereotyped roles of the genders.” (Article 20, paragraph 2).

The *Gender Equality Act*, in addition to the principle guarantee of gender equality, which implies the “equal participation of women and men in all fields of public and private sector [hence in the field of science], in accordance with generally accepted rules of international law, recognised international treaties, the Constitution of the Republic of Serbia and laws, which are to be respected by all” (Article 2) regulates several essential issues for achieving gender equality in society and various areas of social life. These issues include:

1) Equal opportunities policy, which implies “the accomplishment of gender equality in all stages of planning, decision-making and implementation of decisions, which are of influence on the status of women and men” (Article 3, paragraph 2). The state and public authorities pursue a policy of equal opportunities in all areas of social life, including science, because they are explicitly obliged to do so not only by the Act (Article 3, paragraph 1), but also by the *Constitution of the Republic of Serbia* (Article 15).

2) Special measures (permanent or temporary, Article 7) as instruments of equal opportunities policy aimed at eliminating or preventing the unequal position of women and men in society, including inequalities in the field of science. The Constitution, the *Prohibition of Discrimination Act* and the *Gender Equality Act* explicitly regulate the non-discriminatory character of special measures.<sup>14</sup> Some of the special measures, relevant for the field of science, are regulated by the Constitution,<sup>15</sup> and some by the *Gender Equality Act*, such as: measures related to absence from work due to pregnancy and parenthood, which “must not be any barrier to promotion to a higher rank, advancement or professional training.” (Article 16, paragraph 2), nor may they be “the ground for assigning a person to an inadequate job or terminating the employment contract in accordance with the law regulating labour.” (Article 16, paragraph 3).

3) The explicit provision of the Act that “gender must not be any barrier to promotion at work” (Article 16, paragraph 1) is particularly important for the field of science and is therefore particularly singled out.

The *National Strategy for Gender Equality* for the period 2016–2020 does not mention science as a special area important for achieving gender equality, but

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<sup>14</sup> Article 21 paragraph 4 of the *Constitution of the Republic of Serbia*, Article 14 of the *Prohibition of Discrimination Act* and Article 7 of the *Gender Equality Act*.

<sup>15</sup> For example, special protection of women at work (Article 60 paragraph 5 of the *Constitution of the Republic of Serbia*), special protection of mothers and single parents (Article 66 paragraph 1 of the *Constitution of the Republic of Serbia*), special protection of mothers before and after childbirth (Article 66 paragraph 2 of the *Constitution of the Republic of Serbia*) etc.

sporadically mentions it in the context of education. We single out only activities and measures related to gender equality in science, one of which is related to gender-sensitive formal education and refers to the inclusion of women's contribution to science, culture and art in the content of school subjects and university modules. The strategy also indicates two specific goals related to science, but in the context of higher education and public policies.

One goal is to “develop knowledge and visibility of academic results in gender studies”<sup>16</sup> Measures to achieve this goal include: promoting and supporting gender studies as a source of knowledge about gender relations in order to ensure the improvement of human resources in this area at the highest educational level; increasing the visibility of gender studies; strengthening the impact of gender studies on the wider academic community; encouraging and supporting interdisciplinarity in academic study programmes; introducing new disciplines in gender studies at universities; strengthening the impact of gender studies on changing gender patterns and developing a culture of gender equality; encouraging and financially supporting scientific research and gender relations; encouraging and supporting the study of specialist, master's and doctoral studies in gender, especially regarding female members of vulnerable groups; increasing the number of students in specialist, master's and doctoral studies that are financed from the state budget.

The second goal relates to public policies and the “inclusion of a gender perspective in all strategic documents”,<sup>17</sup> which also includes strategic documents in the field of science and research. This goal relies on the observation that prevailing practices show that there is no prior gender analysis and gender impact assessment during the planning of the strategy, that gender equality is not integrated into the strategy as a whole but is included in the strategy as a separate “women's” component and / or as a separate part dedicated to gender equality.

Measures that serve to overcome the problems identified and achieve the goals set include: developing a methodology and procedures for introducing a gender perspective into public policies in science; standardising gender equality terminology, binding instructions for the use of non-discriminatory language and consistent use of gender-sensitive language in the regulations and official communication of public administrative bodies; implementing anti-discrimination regulations in a timely and effective manner; mandatory inclusion of gender equality in policy objectives set out in strategic science documents; ensuring equal participation of women and men in the process of planning, preparing and drafting strategic documents in science; integrating a gender component into all regulations in the field of science; providing adequate resources and means for the implementation of special measures provided for in laws and strategic documents in the field of science; informing the public about the application of special measures in the field of science, especially those related to the improvement of the position of vulnerable groups of

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<sup>16</sup> See goal 1.3 of the *National Strategy for Gender Equality for the period 2016 to 2020*.

<sup>17</sup> See goal 3.2 of the *National Strategy for Gender Equality for the period 2016 to 2020*.



women; developing partnerships between women and men in the promotion of gender equality in science and the creation of gender-sensitive policies in science.

The *Science and Research Act* (2019) states in its foundational provisions that, in addition to the general norm regulating the use of gender-sensitive terminology for all positions, professions, occupations and titles (Article 1, paragraph 2), gender equality in science and research, as well as in decision-making bodies (Article 4, paragraph 1, item 8) is one of the essential principles on which science is based.

Gender equality in science – as one of the principles on which science is based – is not operationalised in the provisions governing the objectives of scientific research (Article 8) and programmes of general interest to the state (Article 12). Some provisions of the Act could also be interpreted to include gender equality and a gender perspective in scientific and research work, although this is not explicitly prescribed by the Act – for example: the obligations of scientific organisations to plan human resources (Article 9, paragraph 1, item 8), the obligation to be involved in international trends, to establish and maintain international cooperation and apply for projects of international funds (Article 9, paragraph 1, item 14), etc. – because all the activities listed in international documents require that the principle of gender equality be taken into account.

While gender equality in decision-making bodies is emphasised as a starting principle of scientific and research work, its operationalisation is missing in the provisions governing the election and composition of the National Council for Scientific and Technological Development (Article 15),<sup>18</sup> the Committee for Accreditation (Article 19), the Commission for Acquiring Scientific Titles (Article 23), the Specialised Scientific Boards (Article 26),<sup>19</sup> the Governing Bodies of Institutes founded by the state and financed from the state budget (Article 60). Thus, this initial principle, which is also emphasised by the *Strategy of Scientific and Technological Development* as one of the planned activities, remains a proclamation in principle only, with no concrete application.

The Act also regulates statistical records in the field of science. The Register of Researchers notes, among other things, the gender of researchers (Article 68, paragraph 10), illustrating the representation of women in this group. This data is also used in the database of research programmes of general interest to the state and in this context can be important for understanding the representation of women in research teams in various sciences.

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<sup>18</sup> The previous *Scientific Research Act* contained a provision which stipulated that gender equality be taken into account when appointing members of the National Council for Scientific and Technological Development, who are elected from among the representatives of organisations performing scientific research (Article 13, paragraph 7). In the current composition of this body, 3 of the 13 members are women (23%), which can be seen in the Decision on appointment on the website of the Ministry of Education, Science and Technological Development of the RS from October 5, 2016.

<sup>19</sup> The previous *Scientific Research Act* contained a provision that gender equality be taken into account when appointing members of the parent scientific committees (Article 24, paragraph 7).

The only special measure regulated by the Act is the right of a female scientist to submit a request that the deadlines for election to a position be suspended and not included in the deadline for election or re-election, while she is on maternity leave (Article 101).

It is worthy of note that the *Strategy on Scientific and Technological Development* only mentions Horizon 2020 and the European Research Area at the very end of the introductory section of the description of the mission of the strategy, which refers to European documents relevant to this area.<sup>20</sup> Gender equality in the field of science is recognised neither among the basic findings on the problems in this area, nor among the general and specific goals of the Strategy. This general approach has consequences for other parts of the Strategy, in which general and specific goals are operationalised.

The promotion of gender and minority equality in science is stated only once in the Strategy,<sup>21</sup> which in general states two activities that should contribute to this: one is the promotion of gender and minority equality at all levels of decision-making, and the other refers to the implementation of gender budgeting according to the Guidelines for gender budgeting at the national level in the Republic of Serbia. Only two are cited as indicators of the implementation of these measures: the percentage of gender representation at different levels of decision-making and the share of women in the total number of researchers. Other Horizon 2020 goals (e.g. gender balance in research teams and gender content in research) have not found a place in the Strategy. In the section on international cooperation in science, Horizon 2020 is specifically mentioned among the objectives (part 5, item 2), but none of the numerous activities contained in Horizon 2020, nor the accompanying documents related to the promotion of gender equality in science, is included in Strategy.

- The *Action Plan for the Implementation of the Strategy* envisages three special measures (items 4.6.1 and 4.6.2) that should contribute to the improvement of gender equality in science. One of the measures refers to the increase of the percentage of women in the total number of researchers (at least 40% of the underrepresented gender in employment and / or career advancement and in the preparation and evaluation of research and development programmes), the second refers to the evaluation of women's research (awards for recognising the lifelong achievements of women in science and an additional award for young women researchers, creating an assumption that makes a career in science look more attractive to young women),<sup>22</sup> while the third refers to support for the development and promotion of women's innovative entrepreneurship (e.g. through and announcing public calls for this purpose). Although the Strategy states that one of the activities to promote gender equality is to increase the participation of the underrepresented at

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<sup>20</sup> Introductory section of the Strategy – Mission of the Strategy, paragraph 2.

<sup>21</sup> Part 4, which refers to human resources, among the measures for achieving the goal (item 6) and indicators that speak about the realisation of the goal set (item 12).

<sup>22</sup> See further: Dokmanović & Đurić Kuzmanović 2012; Nikolić & Vladislavljević 2017.

all levels where decisions are made on science and technological development, the Action Plan does not establish any special measure that contributes to the realisation of this activity.

It is significant that both the Strategy and the Action Plan cite gender budgeting as one of the important instruments for promoting gender equality in science and technological development. This measure was introduced by the *Budget System Act*, which regulates the most important issues of gender budgeting: gender responsive budgeting, which “shall mean incorporating the principle of gender equality into the budgetary process, which implies a gender-based assessment of budgets and restructuring revenues and expenditures in order to promote gender equality” (Article 2, paragraph 1, point 58 6); the goals of the budget system, including “allocation efficiency that implies allocating budget funds in order to promote gender equality.” (Article 4, paragraph 1, item 4); “Defining gender-responsive goals, gender equality performance indicators, outcomes and results, which show the planned expected contributions of programmes, programme activities or projects to achieving gender equality” (Article 28, paragraph 6) during the preparation of the programme budget model. In addition, in the Guidelines for the introduction of gender responsible budgeting (2018) the Ministry of Finance of the Republic of Serbia has specified the manner of implementation and steps that need to be taken in order to include gender equality in the activities of all state budget beneficiaries, including not only state bodies responsible for higher education, science and technological development but also all institutions and organisations in these areas. According to the same Guidelines, the annual plan for gender responsive budgeting regulates the procedure of preparation and adoption of the budget of the Republic of Serbia for each year and the integration of gender equality in the programme activities of all budget beneficiaries.

## In place of a conclusion

The answer to the question raised at the beginning of this paper may be summarised in a few basic observations.

1) The strategic and normative framework of gender equality in science in the Republic of Serbia is set in principle in the *Constitution of the Republic of Serbia* as the highest and underlying legal act, in laws and strategic documents. These documents contain some of the most important principles and instruments for creating an environment in which there are opportunities to achieve gender equality in science. Principled guarantees that enable this include: guaranteeing equality between women and men, prohibiting and sanctioning gender-based discrimination, the obligation of the state to pursue a policy of equal opportunities in order to remove obstacles to gender equality and to take special measures to constitutionally proclaim the right to achieve equality.

2) The policy of equal opportunities is not consistently operationalised in strategic documents and normative acts related to science and research, and neither is gender equality. It is therefore necessary to integrate equal opportunities policy as

a starting point into science, research, technological development and higher education strategies as well as into legislation in these areas. A policy based on the principle of equal opportunities presupposes a set of concrete and various special measures that should contribute to overcoming the gender gap in science, especially in three basic segments related to: scientific career and advancement; gender balance in research teams, management and supervisory bodies and leadership positions; gender mainstreaming in research content.

3) Strategies and regulations related to science do not follow to the necessary extent the international documents on gender equality in science, especially when it comes to very specific special measures in these documents that should contribute to its effective achievement: at the individual level (scholarships, other incentives, measures related to work-life balance and parenting – e.g. incentives for both mother and father to take leave for child care, etc.); in team activities and in decision-making bodies (gender balance in scientific and research teams, quotas for the underrepresented sex in decision-making bodies and in management positions, especially in state budget-funded scientific institutions as well as decision-making bodies on public policies and strategies in science / national council, accreditation commissions, etc.); in the research contents (the inclusion of the gender component in the competition conditions and criteria for evaluation of submitted projects, giving a ranking advantage to projects integrating the gender dimension into their research contents over projects which produce the same results, but without the gender dimension integration).

4) Strategies and legislation are not harmonised in terms of content. This is especially evident when the activities and special measures envisaged in the strategic documents, which are numerous and specific, are compared with the legal solutions, which contain a very small number of special measures. It is also noticeable when comparing the principles from which the legislator starts when regulating the field of science with the operationalisation of those principles through legal solutions. Strategic documents define the directions of public policies in the field of science, and in laws those policies become positive and become binding norms. A policy of equal opportunities cannot be pursued without taking special measures. Therefore, it is necessary to prescribe in the legislation, guided by the activities and priorities set in the strategies, general and special, permanent and temporary measures that aim to establish an environment in which it is possible to achieve gender equality in science.

5) Gender budgeting is, at this moment, a very important tool for improving gender equality in science. It is a kind of special measure that obliges all institutions in the field of science and higher education whose programme activities and work are financed from the state budget to integrate gender equality into the content of their activities and to define gender-responsive goals, gender performance indicators, outcomes and results to show the planned expected contributions of the programme, programme activities or project to the achievement of gender equality.

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