



Women, water and equity: an agenda that makes sense?

Mulheres, água e equidade: uma agenda que faz sentido?

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ABSTRACT: The gender issue in the 2030 Agenda has spaces in several targets of the Sustainable Development Goals (SDGs), including SDG 6, which focuses on water management, drinking water, and sanitation. The United Nations (UN) highlights the differentiated role of women and girls in the provision and management of water, particularly in situations of water insecurity due to water shortages or inefficient sanitation services. In this sense, the objective of this article is to highlight convergences, gaps, and opportunities to promote the water and women agenda in Brazil, based on the articulation of national and local public policies. The topic brings progress linked to the broader context of women's achievements for equal spaces, access conditions, power, and opportunities in the country, where this agenda is still under construction. The organizational and participation gaps, and the discontinuity of budgets hinder the implementation of policies, requiring a strategy to incorporate the gender perspective on the waters management considering: i) the internalization of this agenda in the official structure of water management and governance; ii) the opening of participatory spaces at different levels and decision-making instances (community, hydrographic basin, governments, companies and others); iii) the incorporation of the theme in public and private institutions and forums; iv) the effective articulation of SDGs 2, 5 and 6 with national laws for greater inclusion of women in water management and governance.

Keywords: gender and water; SDGs and policies; sustainability; participation.

RESUMO: A questão de gênero na Agenda 2030 tem espaços em diversas metas dos Objetivo de Desenvolvimento Sustentável (ODS), incluindo o ODS 6, cujo foco é gestão da água e universalização do saneamento. A Organização das Nações Unidas (ONU) destaca o papel diferenciado de mulheres e meninas no provimento e gestão da água, particularmente em situações de insegurança hídrica por escassez de água ou ineficiência de serviços de saneamento. Nesse sentido, o objetivo deste artigo é destacar convergências, lacunas e

oportunidades de promoção da agenda água e mulheres no Brasil, a partir da articulação de políticas públicas nacionais e locais. O tema água e mulheres registra avanços no contexto mais amplo de conquistas por igualdade de espaços, condições de acesso, poder e oportunidades no país, embora esta agenda esteja ainda em construção. No tocante à gestão da água, o artigo apresenta lacunas organizativas e de participação e descontinuidade de orçamentos que dificultam a efetivação das políticas. São necessárias estratégias de incorporação da perspectiva de gênero considerando: i) a internalização dessa agenda na estrutura oficial de gestão e governança das águas; ii) a abertura de espaços participativos em diferentes níveis e instâncias decisórias (comunitário, bacia hidrográfica, governos, empresas e outros); iii) a incorporação do tema nas instituições e foros públicos e privados; iv) a articulação efetiva dos ODS 2, 5 e 6 às leis nacionais para maior inclusão das mulheres na gestão e governança das águas.

Palavras-chave: gênero e água; ODS; políticas de sustentabilidade; participação.

1. Introduction

This article addresses the relationship between women and water in the context of the UN 2030 Agenda, aiming to highlight convergences, gaps and opportunities to promote this relevant issue from the articulation of local public policies. It focuses on the initiatives, data and proposals of organizations from the countries that are part of the United Nations (UN). The text has as its pillars the bibliographic analysis and an exploratory analysis of budget data and initiatives of the Brazilian federal government aimed specifically at women.

The denial of the rationalist-positivist paradigm, as well as patriarchal values and customs in power relations, work environments and leadership modes between men and women mark the female performance that builds the gender agenda at the international level. This agenda is motivated, historically, by the persistence of invisibility or social distinction present in spaces where there are limitations or restrictions on women. Gender inequalities or asymmetries are engendered in the private and public spheres, being both interconnected, defined simultaneously and permanently fed back into the various themes and social and political spaces.

According to Madsen (2018), two moments were milestones of the women's organization around the struggle for social justice: Planeta Fêmea (Women's Tent), which took place during the 1992 UN Conference (Rio 1992), and the Global Women's Territory, at the 2012 UN Conference (Rio 2012). In the 2030 Agenda, the UN includes the protection of human rights, the promotion of gender equality, the elimination of all forms of discrimination and the empowerment of women and girls (United Nations, 2015; WMG, 2018).

The debate that generated this understanding is incorporated, in part and to varying degrees, in the organizations linked to the United Nations, in agreements with its member countries and institutions linked to the organization. The UN 2030 Agenda brings this debate broadly, on gender women, highlighted in the Sustainable Development Goal (SDG), with the perspective of unfolding in concrete actions between 2016 and 2030.

On the theme of environment and water (extending to sanitation), the approach of this agenda also incorporates part of the academic debate and follows the discussions and recommendations of UN events. The conferences of Stockholm (in 1972), Mar del Plata (1979), Dublin (1992) and Rio

de Janeiro (1992) are remarkable in this context. Global initiatives, such as the *Global Water Partnership* (1996) and the *Gender and Water Alliance* (in 2000), as well as the subsequent World Water Forums.

On issues related to gender, the human right to safe drinking water and sanitation, the special rapporteur on the topic, Leo Heller, highlighted the need for a transformative approach to achieving gender equality related to the human right to water and sanitation systems/solutions (United Nations, 2016). The document highlights the specific needs of women and other vulnerable groups such as children, indigenous people, the elderly and communities. The UN 2030 Agenda considers it a priority to recognize and address social inequalities that affect the gender issue in its broad sense (United Nations Women, 2018a; 2018b), which implies promoting de facto participatory spaces, including minorities and local communities.

The World Health Organization (WHO) and the United Nations Children's Emergency Fund (Unicef) (WHO & Unicef; 2013; 2020b) demonstrate that women are the providers of water in situations of scarcity or even daily, when there is a lack of networks in households. Water aid/WSSCC/Unilever (2015) and Graham *et al.* (2016), also using Unicef data, reach the same conclusion.

This is how the debate on women and gender has been built, leading to advances in laws and public policies in several countries, including Brazil. This is the case of the incorporation of the gender perspective in actions related to the National Water Resources Policy (PNRH), although with limitations. Basin committees and councils, in isolation,

also address sections of women's participatory insertion, but all still without structured data for analysis.

2. Gender equity policies at the UN and in Brazil

The UN 2030 Agenda provides a summary of the debate on women and gender. The message aims to recognize that inequalities imply, in addition to effective policies and actions, understanding the limitations of the state and the market in promoting equality and solutions to the deep social and power deficit installed in society (United Nations, 2015; Madsen, 2018; *UN Women*, 2018a). In the SDGs, the UN recognizes that the economic field has not brought sustainable solutions, but the reproduction and deepening of inequalities between nations, peoples, and social classes, which affect women, are manifested (United Nations, 2015).

The Agenda also recognizes the need to strengthen the position of women in the most diverse decision-making forums. However, the empowerment of gender equity agendas and the recognition of the role of women depends on the commitment of the nucleus of power in favor of the cause. At the state level, this adherence requires a specific public budget, so that the various agendas that bring specific agendas for women can promote and respect the voice of women in strategic places. However, the dispute over budgetary resources has a series of themes positioned by the rulers ahead of the causes of women and gender, with other actors and interests.

In the private sphere, the reduction of inequalities is also the result of advances in women's

specific working conditions, wages, and rights (United Nations, 2015; *UN Women*, 2018a). In sectoral terms, for example, around water resources, drinking water, and sanitation, even if a country has isolated initiatives to promote the performance of women, the assumption of sustainability lies in the integration into environmental, social, and political-economic contexts and the consideration of the SDGs as a whole.

Thus, for a sub-theme (or an SDG in particular) not to be limited to the debate of conceptions, it is important that it be incorporated into public policies (Ipea, 2015, 2018) within official priorities (of the UN and member countries), including values effectively allocated to reduce inequalities. Partnerships should follow, as indicated in the 2030 Agenda, encouraged and supported by these policies, ideally with the state as the protagonist and its necessary budget support.

2.1. The challenge to public policies for gender and women at the global level

To get an idea of the global difficulties in this regard, according to *UN Women* (2018a), the UN Fund for Gender Equity (FGE) allocated, for all topics on the agenda, US\$65 million in donations, in the period from 2009 to 2018. There were 121 projects in 80 countries, in the most diverse themes, of which US\$3 million for Brazil, reaching more than 10 million beneficiaries, in addition to strengthening more than 140 organizations (*UN Women*, 2018a).

Despite the small size of the FGE, the contributions to the initiatives of *UN Women* benefited 535.8 million people directly during this period, with 97% of the projects reaching people in vulne-

rable situations. However, there is dependence on donations from a small number of countries, making the fund limited, restricted to actions to qualifying projects. According to the aforementioned report of *UN Women*, four countries and one economic bloc are the largest donors to the *UN Women*: Sweden, United Kingdom, Norway, Japan and European Union, in that order. In 2017, only six projects were implemented in Latin America and the Caribbean, with values between 214 thousand and 509 thousand dollars, that is, only small projects, such as support for training/events.

Among the difficulties (weaknesses and threats) of the FGE, the very *UN Women* (2018a, 2018b) list:

- I) the low share of the FGE in the volume of UN funds;
- (ii) unsound fund raising message and strategy;
- (iii) reliance on philanthropic donors;
- (iv) targeting of other, smaller and more difficult-to-reach funds;
- (v) uncertainties about the future of the fund.

Considering also the insufficient budget in programs of the UN and of the poor countries adhering to the 2030 Agenda, the promotion of the SDGs is also low or uncertain, in spite advances in diagnoses and collaborative institutional arrangements around the globe.

2.2. The promotion of policies for women in Brazil: advances and limitations

In Brazil, initiatives structuring transversal policies for women date back to 1985, with the end

of the military dictatorship and the creation of the National Council for Women's Rights (CNDM - Conselho Nacional dos Direitos da Mulher). However, the executive unit (a State Secretariat, usually) has been transferred between ministries in different governments (Ipea, 2018), weakening management and its agenda. Structural measures and normative advances in this area occurred mainly in the decade 2000-2009, on the II National Plan of policies for Women (II PNPM - II Plano Nacional de Políticas para Mulheres) (Brasil, 2008). The document, the product of debates with society, government bodies and various institutions, social and women's movements, as well as scholars and the political nucleus in the Executive and Legislative branches, explains that "it is guided by the principles of equality and respect for diversity, equity, women's autonomy, secularism of the state, universality of policies, social justice, transparency of public acts and social participation and control." (Brasil, 2008, p. 27).

These principles align and complement, according to the II PNPM, with guidelines such as policy integration, sustainable and democratic development, compliance with treaties, international agreements and conventions, design and promotion of policies, programs, institutions and debate forums. With such guidelines, the state must promote gender equity, women's freedom in relation to their bodies, and their social (and ethnic) rights. It should also create instruments and indicators on inclusive and non-sexist education, combat violence against women and provide budget allocation that meets such directives (Brasil, 2008). The document, therefore, has strong convergence with the propositions of the UN agendas, such as the SDGs.

In this regard, Ipea (2015; 2016; 2018) details advances, limitations and obstacles generated,

as well as the responsible bodies, discontinuous initiatives and oscillation of allocated values, up to operational problems, such as lack of alignment between the Multiannual Plan (PPA - Plano Plurianual) and the Federal Budget Law (LOA - Lei Orçamentária da União), for example. Thus, limitations and setbacks in the implementation, monitoring and achievement of the objectives of the policy and programs devised within the scope of the federal government in the II PNPM are pointed out.

Although the trajectory of incorporation of the gender perspective through the internalization of the global agenda is relevant, in Brazil the practical protagonism resides in isolated initiatives in communities, rather than in nationally articulated movements. In addition, the growing presence of women in companies, in the public sector, in associations, NGOs and other institutions related to water is due to three essential factors:

- i) conquests of spaces in society, in a slow process;
- ii) improved conditions for women to access and complete higher education;
- iii) consolidation of equal opportunities in public tenders.

The democratization of the country after the military dictatorship and the Federal Constitution of 1988 are the foundations of these advances.

At the same time, the debate registers differences in remuneration, in prominent positions in management and in decision-making processes. According to IBGE (2018b), the representation of women reaches only 10.5% among parliamentarians and less than 10% in ministries. This underrepresentation reflects the difficulties of equity in the

federal sphere, which is repeated in the others and little changes in the city halls, neighborhoods and communities. For IBGE (2018b), women aged between 25 and 49 years, precisely in their reproductive phase, received, in 2018, 79.5% of the total salary paid to men, which highlights the gender difference that occurs in the Brazilian labor market.

A particular point of the policy implementation challenge is the small structure of the responsible ministry (Mostafa *et al.*, 2019), which was felt when the budget was expanding, in the first years of the II PNPM. The size of the budget has always been relatively low, even though it is known that the Special National Secretariat for Policies for Women (SEPM - Secretaria Nacional Especial de Políticas para as Mulheres) and, later, the Ministry of Women focused on cross-cutting actions, as was the purpose of the II PNPM.

About two dozen ministries, related entities and municipalities were responsible or partners in the execution of PPA programs with some relation to gender policies (Brasil, 2013). However, before 2012, in just one year, the amounts settled exceeded R\$ 100 million in transversal actions or pilot in the theme (values corrected by the IBGE's National Consumer Price Index (INPC – Índice Nacional de Preços ao Consumidor)); in 2013 and 2014, this amount was again exceeded, but then fell for the set of SEPM programs/initiatives, with the relocation of this portfolio to the Brazilian¹ Ministry of Women, Family and Human Rights (MMFDH - Ministério da Mulher, da Família e dos Direitos Humanos) in 2021. In addition, there is a lack of clarity regarding

the allocation of resources by themes and executing units, as well as uncertainties about the significance of the actions.

The investment overview shown below illustrates actions to protect/support women and gender issues in Brazil, in the period 2000-2020. They have been dispersed (Brasil, 2013), with greater centralization in the coordinating unit, The National Secretariat of policies for women (SNPM - Secretaria Nacional de Políticas para as Mulheres) of the MMFDH. Of the 53 budget actions identified (many of them without any allocation for years, others extinct, grouped or modified) that made up what can be called the budget design for the gender and women's agenda within the Union; the main 13 of them (Table 1) allow us to observe, in theory, a relevant thematic nature of the initiatives.

Since 2015, only two of the actions shown in Table 1 have concentrated SNPM/MMFDH allocations, which makes it difficult to analyze budget continuity and results obtained on relevant topics. Thus, the current agenda on the topic of transversal actions for women is reduced to the issue of violence and few other scattered allocations.

As for the historical data of the budget authorized, committed and executed (here considered the amounts "paid" plus "remains to be paid"² (RAP-Paid)) for the women topic, it is noted that they are very distinct, as shown in Figure 1, with data from the Integrated Planning and Budget System (SIOP), fiscal years 2002 to 2020, corrected by the National Consumer Price Index (INPC) of IBGE.

¹ Institutional and focus changes that have occurred recently can be seen in the Provisional Measure (MP - Medida Provisória) n°. 726/2016 (converted into law No. 13,341 / 2016) and MP No. 870/2019 (converted into law No. 13,341 / 2016). 13.844/2019).

² The amounts noted as "sum paid" refer to payments made on the budget for the year. In turn, the "Sum paid + RAP paid" incorporates amounts from previous years paid in the year cited.

TABLE 1- Union Budget actions for women³ from 2002 to 2020.

Actions	Description of Actions according to the Brazilian federal budget 2002 to 2020
09HV	Support for Projects to Encourage Women's Economic Autonomy
10UJ	Implementation of the National Information System on Violence Against Women
147J	Construction of the Institutes of Women's and Children's Health and Infectious Diseases
210A	Promotion of Equality and Women's Rights Policies
210W	Support for Economic Organization and Promotion of Citizenship of Rural Women
2A62	Promotion of Traditional Activities of Indigenous Women
0726	Support to Kindergartens, Restaurants and Laundries to Improve the Living Conditions of Working Women
1748	Studies and Research on Women's Rights
2053	Support for the Implementation of Intersectoral Actions and Programs for Women
4905	Training of Women Managers in the Rural and Urban productive Sectors
5023	Support for the Implementation or Functioning of State or Municipal Bodies of Policies and Rights for Women
20T0	Support to Social Planning and Management with a Gender Perspective in Rural Territorial Development
4378	Promoting Race, Gender and Ethnic Equality in Rural Development

NOTE: the actions are identified by the initiative code according to the planning and budget system of Brazil.

Source: Integrated Planning and Budget System (SIOP - Sistema Integrado de Planejamento e Orçamento). Organized by the authors.

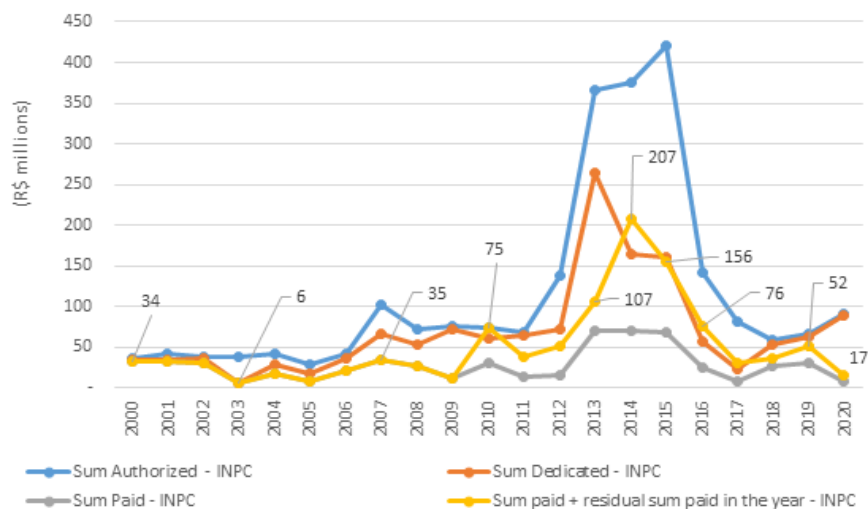


FIGURE 1- Budget of initiatives aimed at women from 2002 to 2020 in Brazil.

Notes: Figures in the graph are the amounts paid plus residual amounts paid in the year (yellow line). Values in millions of R\$, obtained according to footnote n° 3 and updated by the National Consumer Price Index (INPC-IBGE) for December 31, 2020.

Source: Integrated Planning and Budget System (SIOP - Sistema Integrado de Planejamento e Orçamento). Elaborated by the authors.

³ The search in SIOP had as filter "actions", starting from a relationship with initiatives on "gender", in addition to "women". Thus, 165 initiative records were identified referring to the 53 listed actions, 142 with execution records (values "Paid + Rap Paid") between the years 2002 and

The data show that only between 2013 and 2015, as already mentioned, there were more expressive amounts in the authorized, committed and paid (this, reaching R\$ 207 million), although with disbursement much lower than authorized. The level of less than R\$ 100 million/year is in fact the size of this set of actions, in the set of 165 initiative records, over the years analyzed, with authorization in the annual budget. In addition, 23 of these records, which would be initiatives of the various agencies, had zero execution, leaving, therefore, 142 initiatives executed between 2002 and 2020 – a total of R\$ 1.00 billion. In addition, it is noteworthy that, with a small budget, there is still an outlay, that is, effective execution at low levels (in the case of 2020, only R\$ 17 million of R\$ 52 million, in the highlighted actions).

On the other hand, it must be recognized that other transversal actions – from agencies, states, municipalities, NGOs, international cooperations, among others, add resources to transversal and sectoral projects and policies aimed at some promotion of the role of women, with the reservations already made. Although it is not intended to delve into cases, the following subsections bring initiatives and proposals on the topic of water and women in Brazil. The complex scenario of the evolution of the actions and the budget data presented so far allow us to conclude that a possible women and water agenda should absorb the general debate of the women's struggle, as well as contribute in the same direction. In addition to its own experiences, Brazil has the possibility of incorporating the debate

and policies in force in other countries, since the topic has decades of learning.

3. Gender, water and women: a pre-SDG agenda

Prior to the UN 2030 Agenda, a milestone of the initiatives of institutions linked to or close to the UN on the topic of water and gender is the document *The Gender and Water Development Report 2003: Gender Perspectives on Policies in the Water Sector* (Chancellor *et al.*, 2003). This milestone was led by *Gender and Water Alliance (GWA)* in partnership with the *International Water and Sanitation Centre* and other institutions. Subsequently, the agendas of the UN and member countries have evolved in the guidelines on the subject. The SDGs highlight the role of women and their daily interaction with water and their repressed potential in managing solutions for the provision of this good.

GWA has addressed the link between water, sustainability, integrated management and gender equity from four perspectives:

- i) water for nature;
- (ii) sanitation (sewage and hygiene systems) for people;
- (iii) water for the people;
- (iv) water for food (Chancellor *et al.*, 2003).

These topics resume the analysis of water and nature, ecosystems, life in water and preservation from the recognition of multiple uses, common good

2020. The search in this way makes it possible to obtain more accurate data and from various implementing bodies/sections of the Union budget. Surveys with different search parameters may present different data. All values presented in this chapter have been updated by INPC-IBGE to December 31, 2020.

water, and people's rights. Recognizing that access to, care for, need for, and relationship with water are different between men and women, Chancellor *et al.* (2003) warn of the different responsibilities in situations of water scarcity, with women having the role of providing water, in anticipation of SDG 6, targets 6.1 (quality water for all, attention to women and girls) and 6.2 (sanitation and hygiene conditions with a focus on women and girls).

In this sense, sectoral regulation must see vulnerabilities and take measures that induce progress. The local, community participatory process is essential to incorporate the water and gender agenda, given the proximity of the challenges and solutions of those who most live with the situation. The joint responsibility of men and women and the sharing of decisions are key to gender equity in water issues. This understanding applies, according to GWA (Chancellor *et al.*, 2003), to state institutions and power centers, which must recognize the potential of women in relation to the topic, empowering them.

Chancellor *et al.* (2003) also addressed what was incorporated 12 years later, in the UN 2030 Agenda, topics linking water and sanitation: ensuring that all men and women, particularly the poor and vulnerable, have equal rights to economic resources, basic services, ownership and control over land, natural resources, appropriate technologies and financial services, including microfinance (SDG 1); issues on water, gender and health (SDG 3); ways to achieve gender equity (SDG 5); and reducing inequalities within and between countries (SDG 10). In rural areas, young people and children also spend time providing water, reducing their dedication to studies, the theme of SDG 4 (inclusive and quality education).

In view of this interconnection of topics, the *United Nation Women* (UN Women, 2018a; 2018b) advocates that the issue of gender permeates all SDGs, recognizing delays in this topic. According to these publications, there are 54 indicators in the 2030 Agenda addressing the gender issue, in the 17 SDGs; however, they still do not cover the needs of indicators for the topic in its entirety. An effort in this direction is justified, when it is observed that 125 million women and children, approximately, mainly girls, experience daily, in various parts of the world, the impact of social and human rights inequalities and access to safe drinking water and sanitation (Graham *et al.*, 2016; WHO & Unicef, 2017).

Graham *et al.* (2016), in a study involving 24 African countries, highlighted situations of long-distance travel to obtain water, with women carrying containers of more than 20 kg, sometimes on walks that exceed 30 minutes. According to the authors, there is a 15% increase in girls' enrolment in schools when toilet water systems are installed. The greatest advances in drinking water, sanitation and hygiene services, observed by WHO & Unicef (2013) and WHO/Unicef (2020a; 2020b) since the 1990s, have occurred in Asia and sub-Saharan Africa, regions with the worst attendance rates.

According to the group document *Women 's Major Group* (WMG, 2018) no *High Level Political Forum 2018*, at the end of 2017, approximately 2.3 billion people did not have adequate sanitary equipment (toilet and washbasins) in their homes, even though equitable access to water is a human right flag approved at the UN in 2010. The definition of "adequate" includes safe access to water, hygiene equipment in toilets, regularity and quality of water

that meets the menstrual cycle of women and girls and the quality of life of all.

WMG (2018) indicates that the commodification of water has different impacts on men and women, in addition to the differences in needs already mentioned, as the rise in prices and scarcity more strongly affect the poor population and individuals in vulnerable situations, including women. The entity lists a set of recommendations to the UN High-Level Panel on gender and SDG 6:

1) Education and awareness -awareness and role of women in water issues at all levels of provision and management; adoption of school curriculum with content on menstruation and health; effective participation of women in water and sanitation issues; reduction of time spent and obstacles to contributions, focusing on companies and other organizations.

2) Disaggregation of data, research and monitoring – promotion and dissemination of research on tariffs, income, hours worked to supply the good, accessibility, time and economic burdens for families headed by women; generation and reliable dissemination of data and reports that enable gender-sensitive indicators in monitoring and evaluation in water and sanitation; monitoring in the context of gender equality and human rights to water and sanitation; promotion of initiatives led by women in cross-cutting policies and strategies.

3) Participation of women in decision-making on water and sanitation; encouragement of women's leadership and incorporation of the gender perspective in water and sanitation institutions; development of women's vocational and leadership capacities in these areas; guarantee of women's leadership positions in executive, political and operational

positions in the area through programs, parities and quotas; institutional changes that decentralize the regulation of water uses and access, allowing women's advances in community management.

4) Implementation of policies for equitable access to water and sanitation - institution of water as a human right in legal instruments at local, national and regional levels and participation of women (Law of Transboundary Aquifers, Copenhagen protocol, UN Declaration on Pollution); priority to safe sanitation services in rural areas; strengthening of institutional, policy capacities and cooperation between actors at national to local levels; creation of instruments to monitor technologies and processes of potential impact on water; and implementation of infrastructures and technologies that reduce the workload of women.

It can be observed that these proposals are applicable to the scenario of situations of greater lack of services and inequalities; however, they are not limited to the issue of access and daily struggle for water and hygiene conditions by women. On the contrary, they reach aspects of management and governance (WMG, 2018), as also defended by Murillo (2006) and Nogueira *et al.* (2020).

WMG (2018) also raises concern about the privatization processes of water systems, suggesting that there should be no private appropriation of water, applied where this prevents or hinders access by other users, including due to price. This would be the case, for example, of grants that prevent multiple uses of water, affecting small claimants, as well as future human and environmental uses and leading to the concentration of the water domain. It is also the case of situations where the cutting of water by sanitation service providers can be practiced even

in a situation of calamity or similar condition (being the service public or private), contrary to the thesis of giving water the status of public good, essential to health, human right above commodity (United Nations, 2016; WHO & Unicef 2017).

4. Water management and governance systems and women's participation in Brazil

Although the level of sanitation services in Brazil is above the global average and water resources management systems have mechanisms for women's participation, important gaps remain, repeating the context of gender inequalities in the country in other areas. The sanitation coverage deficit is a reality in the peripheries of cities, rural areas, subnormal housing, and poor municipalities, with emphasis on the North and Northeast regions (Funasa & UFMG, 2018; Brasil, 2021).

Among the communities without adequate systems, Indigenous people, quilombolas, fishermen, extractivists and other traditional ones predominate, especially in the Amazon region, in the semiarid Northeast (Funasa & UFMG, 2018). Although with positive evolution, JMP estimates for WHO and Unicef indicated that, in 2019, there were 8.3% of rural schools without hygiene equipment in the rural region bathrooms in Brazil and another 5.4% had inappropriate facilities (JMP, 2019). All these aspects affect women, from access to water to participation in management, as detailed below.

4.1. Gender inequality and water in Brazil: in water management and access

The scenario of gender inequalities in the management of water resources and sanitation

reproduces, to a substantial extent, the dynamics of sexual and intellectual division of labor found predominantly in our society. Until recently, the tradition of water and sanitation as synonymous with works, themes strongly linked to engineering, led to the prevalence of a majority of male professionals. Since the end of the military dictatorship, the rise of environmental and water policies, in addition to public tenders, have made changes possible.

Although the advances already mentioned are recognized, data from the Brazilian Association of Sustainability Professionals (Abraps, 2018 - Associação Brasileira dos Profissionais da Sustentabilidade) show disparities between professionals in the area of environment and water resources, with more than half being women, with a high degree of specialization (Master's/PhD/postgraduate), and salaries ranging from R\$ 3 thousand to R\$ 9 thousand/month, being below the values received by men. In addition, the low adherence to sustainability practices in corporations continues to be a factor in itself of devaluation of women.

This reality is accentuated in the direct relationship with water in rural housing. Research conducted in rural communities in the semiarid state of Paraíba and Pernambuco (Nogueira, 2013; Nogueira, 2017) recorded that 87% of the families interviewed had the woman as responsible for fetching water for domestic use (housewives, daughters, and granddaughters). Nogueira (2017) estimated that the average time spent to search for water was two hours a day, on the way to and from the source closest to the houses. In these regions, gender inequalities take on clearer features and relate to the issue of school dropout of girls.

The National Household Sample Survey – continuous PNAD (IBGE, 2018a) - pointed out that the frequency of women receiving treated water in

housing was higher in urban areas (93.7% of the population). However, in rural areas, only 34.7% of women lived in households connected to the general water distribution network, representing an extra burden of work and time for women compared to women and men living in urban areas. This situation further deepens gender inequalities in the rural context.

In the same vein, BRK Ambiental/Instituto Trata Brasil (2018) pointed out that 27 million women do not have adequate access to health infrastructure and sanitation in Brazil. According to Trata Brasil (2018), the access to treated water and sanitation would immediately lift 635,000 women out of poverty, most of them black and young. These data illustrate how the limitations of access to sanitation also mean contrasts of gender, social classes, race and others, mirroring inequalities in Brazilian society.

Among the advances in standardization in the area of water management and other related areas are: the prediction of the presence of women in colleges; the recognition of their ownership in policies such as Bolsa Família; the insertion of policies for women in agriculture. Other measures, however, need to be adopted, such as the generation and centralization of data on the subject, continuity of programs with financial contribution in budgets. There is also a debate on the conditions, forums and organizational stage in which the adoption of quotas is important.

Although the Brazilian water resources management model has been designed around consensus principles from the international agenda, particularly the Dublin Conference, the principle that highlights the role of women was not accepted by the National Water Resources Policy (Política Nacional de Recursos Hídricos, Law 9,433 of

1997). This institutional bricolage (Nogueira *et al.*, 2020) of the guiding principles of water resources management in Brazil is partially “justified” by the “technical character” (remembering the knowledge of engineering, hydrology, geology) that dominates this field. Thus, the interactions for the conception of water management were designed around the environmental issue, but without articulation with women's movements (Nogueira, 2009).

It is necessary, then, that the management and regulatory bodies, the councils of cities regarding environment, water management and sanitation, these still to be created in the country, establish a structuring agenda for the participation of women. Even the question of whether or not there is a Brazilian agenda for water and sanitation (or even gender for sustainable development) is unclear. To be effective, such an agenda must be led by women, reaching from local communities to the presidency of the Republic, the Supreme Court, the Public Prosecutor's Office, and Parliament.

In addition, it is necessary that other participatory bodies built by women have a channel of communication and reciprocity in the promotion of rights. It is also expected, on the other hand, that the performance of women with a focus on corporate issues will approach the promotion of the women's agenda in their social demands, for example, with regard to the achievement of sectoral goals, such as access to water, community participation, and population rights.

4.2. Initiatives to promote women's participation in water management in Brazil

The management of water resources by hydrographic basins (CBH) – or entities that play

their role, where they do not exist – is, in Brazil, one of the main examples of possible advances and protagonism of women. The incorporation of the gender perspective in CBHs can lead to the effective participation of women and make the process more democratic, reflecting a better understanding of the specific needs of minorities and women, and contributing to the universalization of access to water.

Initiatives in this direction have been developed in Brazil since 2000, focusing on training. Examples are the courses, field actions and workshops by the Ministry of the Environment/GWA and partners – such as the Training of Trainers for the Gender Issue of the Integrated Water Resources Management of Lusophone countries (GWA) and the Water Resources Training Network (CAP-NET) of the United Nations Development Program (UNDP). For example, measures implemented by GWA, contained in the National Water Resources Plan, as well as actions by river basin committees, ministries such as those of the Environment, Education and Health and their councils.

The challenge is to bring together such initiatives and promote integrated actions, to add efforts and their monitoring, enabling continuity and expansion of the activities carried out. It should be noted that the issue of water and women does not flow in isolation, without advances in the set of subtopics linked to them, as well presented in the II PNPM.

In the theme related to SDG 6, in addition to CBHs, public agencies, councils and other collegiate bodies, community water management initiatives are a space for increasing participation by women, even surpassing CBHs in certain locations. Rocha (2013) points out that the Rural drinking water and

sanitation system of the state of Ceará (Sistema de Saneamento Rural do Estado do Ceará, SISAR/CE) stands out, even in the face of the slow movement of equity in the Brazilian rural environment. According to the author, an essential element in this case is the strengthening of the role of women, who are the main recipient of the benefits of social programs. However, Rocha (2013) highlights a strong presence of young women in the technical staff of the units, medium presence in the boards of local associations and less presence in the functions of counselors and managers. Thus, even in successful initiatives such as Sisar/CE, there is no clear policy to encourage the independent and broad participation of women in water management.

The literature also points out inequalities in the composition of the State Councils of Water Resources (Conselhos Estaduais de Recursos Hídricos, CERH) according to a study conducted from the analysis of the profile of representatives of CERH (Matos *et al.*, 2022). In this regard, efforts must be induced and directed to motivate, facilitate, and value the participation of women in collegiates, secretariats, agencies, and other instances of SINGREH. It is a fact that there is, throughout Brazil, a growing presence of women in water governance bodies – mainly by academia and social organizations. Data from the publication Brazilian Water Resources Conjuncture (Conjuntura dos Recursos Hídricos no Brasil, ANA, 2020) show the distance of parity between men and women in SINGREH: they are 27% Interstate Committees; in CNRH they are 28%; in state Management Bodies women leaders add up to 25%; and in CBHs they are 31%. Women's participation, overall, is only a third of the total.

4.3. *The challenge of women's participation in rural water management*

In the countryside, the relationship between women and water is accentuated, and here it is necessary to illustrate a little more the situation in Brazil. Data from the 2017 Agricultural Census (IBGE, 2019) show that women command more than a third (34.8%) of Brazilian agricultural establishments. Among the 1.76 million women in this condition, 945.5 thousand are producers and 817 thousand are in the co-direction, sharing the function with their husbands. In relation to the previous Census, in 2006, this function went from 12.7% to 18.6%. However, there are no signs of gender equity, recalling Brumer (2004): there is a misconception that women occupy a subordinate position in agriculture, and their work is mistakenly interpreted as simple “help” even when they perform the same activities as men.

Among the experiences that value women's participation there is the example of the mobilization around the One Million Cisterns Program (Programa Um Milhão de Cisternas, P1MC), which supplies the semiarid of the Northeast, mainly by the communities, due to the actions of the Semiarid Articulation NGO (Organização Não Governamental Articulação Semiárido, ASA). This case relies on the design of policies which criteria, from their conception, projects, and public notices of contributions of Union resources, prioritize families headed by women. In this way, the initiative recognizes the role of women in the ways of life of the region and in coexistence with the Semiarid. However, again the greater presence of men even in this initiative

remains, bringing challenges to the participation and decision condition of women (Nogueira, 2009).

Faced with the difficulties and challenges in this area, since the early 2000s, the federal government, parliament and social movements linked to family farming⁴ have established a set of policies that are conceptually convergent with the thesis of equity between men and women. The rules in this sense bring the intention to promote:

- i) the autonomy of rural women to the right to land;
- ii) measures of social inclusion and citizenship;
- iii) and laws, programs, agreements, partnerships for sustainable economic and environmental development, repeating the principles of inclusion of women.

Among the initiatives that are guided by these guidelines, there are positive highlights in the agricultural area involving water management (SDGs 2 and 6), but of small size and limited adherence – examples are the payment for environmental services programs (PSA), sustainable agriculture and soil management against siltation. Although followed by ruptures regarding the values and the continuity of the budget resources, especially since 2016, the following events are in agreement with the SDGS: the National Program for the Documentation of the Working and Rural Woman (Programa Nacional de Documentação da Trabalhadora Rural, PNDTR) – which leads to information on social and productive inclusion for women in rural areas; National Policy the Technical Assistance and Rural Extension to Women (Assistência Técnica e

⁴ It consists of small rural producers, traditional peoples and communities, agrarian reform settlers, foresters, fish farming, extractivists and fishermen.

Extensão Rural para Mulheres – ATER para Mulheres) which does the training and technical advice for the production of rural areas; The Program of the Organization of Production of the Women in Rural Areas – that offers tools for farmers to grow and sell their produce based on agro-ecology and feminist economics; Crédito Pronaf Mulher and the modality of Support of Women in the Agrarian Reform Program – which funds the production of the women of the family farming and the agrarian reform; Programs of the Government Procurement – especially for the Food Acquisition Program (Aquisição de Alimentos, PAA) and the National School Lunch Program (Programa Nacional de Alimentação Escolar, PNAE), which would strengthen the role of women in the production and trade; the National Program of Land Reform, "Minha Casa, Minha Vida" and Green Grant Program (Programa Bolsa Verde), and that recognize the title of the women in the access to the benefits they provide; and the National Policy for Agroecology and Organic Production (Política Nacional de Agroecologia e Produção Orgânica, PNAPO), which aims to reduce the social and environmental impact in production, the value of the cultural and biological diversity and traditional knowledge of the community.

In addition to the initiatives and opportunities discussed in this section and this article, Bech *et al.* (2019) highlight the importance of women's participation in water management in actions such as: creation and structuring of NGOs on the themes of environmental preservation and water sources; community and organizational leadership; construction of adaptation strategies for traditional communities in the face of climatic adversities; socio-productive inclusion with a focus on socio-biodiversity; promotion of innovative productive

systems and management of different extractive cultures; articulation of networks of social organizations and dissemination of knowledge; indication of paths for the diversification of production and consolidation of strategies for adaptive coevolution leadership and management of water and environmental institutions; promotion of water as a human right, focus on women and girls; composition of environmental and water management teams in companies, public agencies and academia.

5. Final considerations

This article discussed the issue of water and women in the context of the SDGs, UN actions and national policies on the topic. In the 2030 Agenda, the topic is transversal in the 17 SDGs, with goals for the integration of actions between UN agencies, signaling a perspective of progress when added to national laws and policies. In Brazil, there have been normative advances in policies for women since the II PNPM, with guidelines, structure of plans, and programs which conceptions are aligned with the SDGs. However, the text highlighted the need for greater integration of actions in the topic and the expansion of the small and discontinuous specific budget for women. There are difficulties in making the guidelines of the policies and targets of the SDGs practical, leaving institutional, participatory, and budget gaps for the planned initiatives.

The theme of water, sanitation and women's management is replicated, as seen, inequalities registered in other areas, such as access to leadership positions, salary differences and opportunities. The recognition of the relevance of women's role in water management, and not just in its provision, converges with the call to “leave no one behind”.

The role of gender in this theme is explained both by its historical relationship with water and by the social and sexual division of labor in societies that are still patriarchal and with clear sexist elements. Therefore, the necessary empowerment of women impacts specific areas in which they act, especially at the local level, in collegiate spaces, such as basin committees, social organizations and water resources councils.

Advances in capacity building with a focus on communities and women's deliberative participation depend on the combined efforts of state institutions, companies, and activists. The insertion of the water theme in the context of the greater struggle of women for rights and equity is a strategic point, as it recognizes links between the various forms of gender inequalities rooted in society and classes, so as not to isolate the topic from its socioeconomic and cultural context. The increase in women's presence in management, consulting, and advisory spaces about water, for example, is linked to the general achievements of women, the reduction of discrimination and their own capacities and skills. Therefore, women's participation and empowerment in water and sanitation cannot yet be associated with measures planned or resulting from public policies. Also for this reason, it is important that women in leadership positions in entities that work with water and sanitation act differently from managers who administer policies and institutions in a patriarchal way.

Finally, it should be noted that a strategy to incorporate the issue of water and women, as seen throughout the text, should incorporate:

i) the internalization of this agenda from the official water management and governance structure,

enhancing investments at different levels (community, district, basin unit, national, governmental, academia, civil society);

ii) the internalization of the gender issue, reaching water managers inside and outside SINGREH from a water security approach;

iii) the institution of Principle 3 of the Dublin Conference in National Water Resources Policy - gender and water;

iv) the articulation of the SDGs, in particular those of numbers 2, 5 and 6, to national laws for the inclusion of women in water access, management and governance initiatives;

vi) the award of good practices related to gender and water and the creation of a gender equity observatory;

vii) training and awareness-raising for the inclusion of the theme of water and women in basin plans, with a specific program in the basin committees;

viii) strengthening the articulation of social movements, making it possible to think about the issue from a participatory, conscious, systemic and integrative approach with a focus on changing paradigms.

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