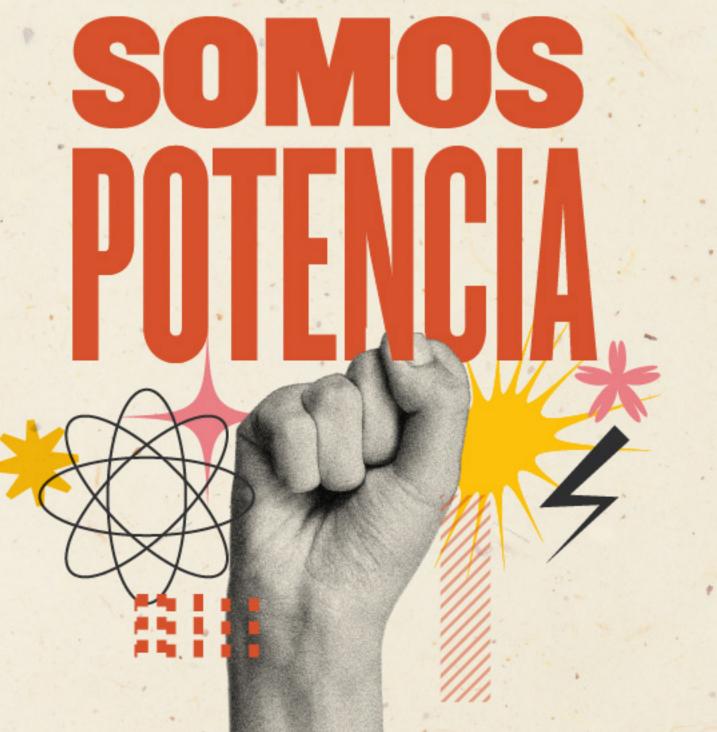
GUIDE FOR GENDER MAINSTREAMING IN THE NUCLEAR SECTOR IN LATIN AMERICA AND THE CARIBBEAN









SOMOS POTENCIA: GUIDE FOR GENDER MAINSTREAMING IN THE NUCLEAR SECTOR IN LATIN AMERICA AND THE CARIBBEAN

Publication of the Regional Cooperation Agreement for the Promotion of Nuclear Science and Technology in Latin America and the Caribbean (ARCAL) with the support of the International Atomic Energy Agency (IAEA), in collaboration with the Chapter Women in Nuclear Latin America and the Caribbean – WiN ARCAL –, within the framework of the Regional Technical Cooperation Project RLA/0/069 – "Promoting Strategic Management and Innovation at National Nuclear Institutions through Cooperation and Partnership Building –Phase II (ARCAL CLXXII)".

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Introduction

SOMOS POTENCIA (WE ARE POWER) is an initiative that highlights the efforts made in terms of gender equality in Latin America and the Caribbean (LAC), which stands as a fundamental catalytic base in order to create inclusive cultures that recognize the diverse contributions and the women's leadership. These efforts are power in the form of will and actions driven by a group that continues to be excluded and invisibilized.

With the support of the International Atomic Energy Agency and the Regional Cooperation Agreement for the Promotion of Nuclear Science and Technology in Latin America and the Caribbean (ARCAL), in collaboration with the Women in Nuclear Latin America and the Caribbean Chapter -WiN ARCAL -, this guide is a tool added to the sum of actions that promote debates beyond the technical discussions around nuclear energy and aim to think about the sector from a broader perspective, questioning both the scientific-technological field as well as the community in general.

Based on different instruments, States and their institutions have assumed commitments to promote the peaceful uses of nuclear science and technology that require the full and equal participation of women. Ensuring the sustainability of all projects in the nuclear field necessarily entails the inclusion from the gender perspective. We have great strengths in LAC, not only because of the similar paths that the countries of our region have gone through, but also because of the strong history of collaboration in the said uses, highlighting as a milestone the consolidation of the Brazilian-Argentine Agency for Accounting and Control of Nuclear Materials (ABACC) with its 30 years of experience.

This first reference document in the LAC nuclear field will not only represent a step-forward due to the added value and the strong symbolic nature that it involves, but also an opportunity for the region to support the actions with a transformative impact that have already been launched in other areas and that seek to **promote practices to address the inequalities that still exist, encouraging networking and the incorporation of women in decision-making processes, and pointing towards collective leadership.**

Developed within the framework of the Regional Technical Cooperation Project RLA/0/069, this guide has a double innovative approach: On the one hand, it makes it possible to make visible the obstacles that women go through narrated from their own experiences and life stories, which gives legitimacy to its necessity and relevance. And, on the other hand, it seeks to strengthen the capacities of INNs and their workers based on genuine efforts towards an overcoming strategy that promotes a cultural change in the nuclear field.

l. V. Garea and M. Belinco, "Women in the Argentine nuclear sector: A present that requires a deepening of efforts", p.23-28, in "Nuclear non-proliferation: women, leadership and networks in Argentina", Nuclear Regulatory Authority of the Republic of Argentina, Buenos Aires, Argentina, 2021.



Gender

Gender refers to the roles, behaviours, activities, relationships and attributes that a given society, at a given time, considers appropriate for people depending on their sex. These attributes, opportunities, and relationships are socially constructed and learned through the process of socialization and upbringing. Gender determines what is expected, what is allowed and what is valued in a woman, in a man or in other non-binary or normative identities. As a social construct, it is not a static concept, but it is transformed and adapted according to the times.

Gender roles

Gender roles refer to social and behavioural norms that, within a specific culture, are accepted as "socially appropriate" for people of a specific sex. These usually determine the responsibilities and tasks traditionally assigned to men and women since childhood. Gender roles are often conditioned by the structure of the household, access to resources and other factors relevant to each context. Like gender, gender roles can change over time, especially with the empowerment of women and the transformation of masculinities.³

ey concept:

뇌 Gender equality

It refers to the equal rights, responsibilities and opportunities of women and men. Equality does not mean that women and men will be equal, but rather that people's rights, responsibilities and opportunities will not depend on whether they were born a certain sex. Gender equality implies that the interests, needs and priorities of women and men are taken into account, recognizing the diversity that exists in these groups. Gender equality is not a women's issue but it concerns and involves men to the same extent. Equality between women and men is considered a human rights issue and both a requirement and an indicator of people-centered development.⁴ The concept of gender equality now also encompasses the equal inclusion of other nonbinary or normative identities.

2. UN Women, OSAGI Gender Mainstreaming - Concepts and definitions. | 3. UNICEF, UNFPA, PNUD, ONU Mujeres. "Gender Equality, UN Coherence and you". | 4. UN Women, OSAGI Gender Mainstreaming - Concepts and definitions.

🔰 Sexism

Sexism is the false belief that one sex is superior to the other. In our patriarchal societies, generally the sex that is considered superior is the male one; this belief is based on the gender roles attributed to men and women or other non-binary or normative identities. There are many manifestations of sexism, such as androcentrism, gender insensitivity, sexual dichotomism, familism, and overgeneralization.⁵

Gender stereotypes

Gender stereotypes are simplistic generalizations about the attributes, differences, and roles of women and men. Stereotyped characteristics about boys describe them as competitive, greedy, autonomous, independent, belligerent and interested in private assets or property. Parallel stereotypes about women portray them as cooperative, welcoming, caring, communicative, group-oriented and interested in public goods.⁶

Gender violence

It refers to harmful acts directed against a person or a group of people because of their gender. It is rooted in gender inequality, abuse of power and the existence of harmful practices and norms. The term is primarily used to highlight the fact that structural power differences based on gender place women and girls at risk of multiple forms of violence.⁷ Gender-based violence can be categorized into the following types: physical, sexual or psychological violence as well as economic or patrimonial and symbolic violence. Within these types, different modalities are conformed according to the forms in which it manifests itself.

🎽 Gender Mainstreaming

Gender mainstreaming is the process of assessing the implications for men, women and other non-binary or normative identities of any planned action, be it legislation, policies or programmes, in all areas and at all levels.

5. UN Women (2012). CEDAW in 10 minutes. Guatemala. | 6. UN Women Guatemala (2016). Let's delve into terms: Guide for journalists, communicators and communicators | 7. UN Women (2021). Ending violence against women. Types of violence. | 8. UN Women Guatemala (2016). Let's deepen in terms: Guide for journalists, communicators and communicators.



Why is gender mainstreaming necessary in the nuclear sector?

Gender issues set the agenda at the international level, whether in the States and their institutions as well as in the different organizations of the civil society. In this context, the full incorporation of women does not only refer to an egalitarian demand, but also to a necessity in terms of socioeconomic development. When we talk about equal opportunities for women, the full exercise of their human rights is at stake.

Women face structural inequalities -visible and hidden- that occur in the educational environment, in the workplace, etc. These inequalities are often manifested through different types of violence. In general, there is a certain resistance in the institutions to consider violence as that which is exercised from the exclusion of women in certain jobs or in preventing the chance of promotion, wage gap for equal tasks, among others.

The importance of taking into account a diverse and inclusive approach is also crucial when moving forward in closing another gap in the nuclear field between specialists and society as a whole, which implies considering women, who constitute more than 50% of the world population. In the same way, it is this group which has the most negative perception of the nuclear energy and its applications.⁹

The lack of data on the role that women play in the different organizations of the nuclear sector interferes with the design and execution of potential strategies to address this problem. Data constitutes fundamental evidence to design and promote policies that respond to our real needs. The absence of data is part of the process of making the inequalities that women face invisible; a reality that intentionally seeks not to be revealed.¹⁰

^{9.} M. Belinco and D. Di Lorenzo, "NUCLEAR WOMEN: Axes to think about the nuclear plan with a gender perspective", https://enula.org/2020/03/ mujeresnucleares-ejes-para-pensar-el-plan-nuclear-con-perspectiva-de-genero/.. Last access 3/28/2022 | 10. V. Garea and M. Belinco, "Women in the Argentine nuclear sector: A present that requires a deepening of efforts", p.23-28, in "Nuclear non-proliferation: women, leadership and networks in Argentina", Nuclear Regulatory Authority of the Republic of Argentina, Buenos Aires, Argentina, 2021

WE NEED TO WORK SO THAT WOMEN BECOME CONVINCED THAT ACCESS TO LEADERSHIP POSITIONS IS A RIGHT THEY ARE ALSO ENTITLED TO. THIS CULTURAL APPROACH MUST CHANGE, ESPECIALLY IN OUR REGION.

Karla Kwiatkowski Lepetitgaland, senior expert, Electronuclear, Brazil

"DIVERSITY AND MULTIPLICITY ENHANCE CAPACITIES AND POSSIBILITIES FOR GROWTH IN ALL AREAS AND THE NUCLEAR SECTOR IS NOT EXEMPT."

Adriana Serquis, president of the Atomic Energy Commission, Argentina "The female leader is closely watched by her male colleagues: she must continually demonstrate her ability to lead a group when performing her duties."

Alba Guillén Campos, founder of the National Center for Nuclear Security of Cuba

"IT IS TIME TO LIVE UP TO THIS HISTORIC MOMENT AND OVERCOME INERTIA, WE CANNOT KEEP WAITING TO BE TAKEN INTO ACCOUNT, WE ARE READY, WE WANT TO BE INCLUDED AND WE WANT EQUITY, BUT WE ARE UNDERVALUED, FOR EXAMPLE, WE EARN A MILLION PESOS LESS IN THE ENERGY SECTOR."

Marcela Zulantay, ministerial adviser of gender in the Ministry of Energy of Chile

#SomosPotencia 8



Obstacles overcome by women in the nuclear sector

With the aim of identifying the obstacles that women face in the nuclear sector, a **questionnaire** was carried out addressing to a sample population of 300 women and non-binary identities, obtaining the response of 217 of them, who detailed their journey in the nuclear field. They emphasized how these barriers hinder participation within said sector, limiting their possibilities of development though not in the same way as their male peers. Simultaneously, we conducted in-depth interviews with women belonging to institutions in the nuclear sector to delve into their careers and their experiences.

The results of the questionnaire obtained by the data collected through 3 tools are detailed as follows: **regional survey**, **1:1 interviews** and a **collective virtual laboratory** instance.

3.1. Profile of the respondents

217 people from LAC participated in the survey, of which 216 perceive themselves as cis women and one person is self-perceived as non-binary. Almost half of the people surveyed (48.4%) declared themselves mestizo (mixed aboriginal and European), 44.2% white, and the rest distributed between Afro, indigenous and others. Almost 60% state that they are in a stable or married relationship; 28% single, 10% separated and the rest in another relationship situation. More than 97% live in urban areas. 31% are between 35 and 44 years old, the rest is divided fairly evenly among the rest of the defined age ranges: 25-34, 45-54 and 55-64, plus those over 65 and 18-25 (ranges jointly considered).

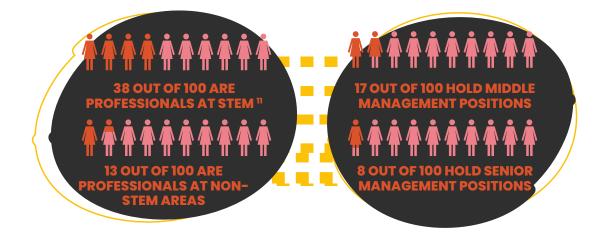
Nearly 5 out of 10 people have a postgraduate degree (master's or a PhD) in science and technology or other fields of knowledge, and 4 out of 10 have a bachelor's degree. Almost 7% have professional education and the rest have compulsory education. 82% of the people who answered the survey currently work in the nuclear sector. The majority (8 out of 10) also work in organizations in the public sphere. 12% work in the private sector and the rest is divided between international organizations, the third sector, state companies and others.

The experience in the nuclear sector is divided between the various time ranges defined in the survey. There is a significant number of participants (25.6%) with more than 20 years of experience; 22.8%, between 11 and 15 years of experience; 15.8%, between 6 and 10 years and 9.8%, both between 3 and 5 years and with less than 3 years of experience.

People from 21 LAC countries responded to the survey. 34.8% of the answers were given from Argentina; 13.3%, from Peru; 8.6%, from Brazil; 8.1%, from Cuba; 5.2%, from Nicaragua and Venezuela; 3.8%, from Chile; 3.3%, from Bolivia; 2.9%, from Uruguay and Bolivia, and the rest from Belize, Costa Rica, Dominican Republic, Paraguay, Mexico, Jamaica, Honduras, Guatemala, El Salvador, Panama and Ecuador.

A great diversity of workplaces and of the type of facility in which they work is observed: the highest percentage refers to people who work in national nuclear energy organizations (national commissions, for example). In the second place, there are the nuclear power plants and, in the third place, academic institutions or universities. Regulatory bodies, technical support organizations, other public sector offices and suppliers to the nuclear sector are the next largest group. The rest is divided into different applications related to nuclear medicine, research and other related activities.

27.6% report that their activities have not been related to any nuclear facility, while 13.8% work in nuclear power reactors. There are women from organizations and facilities throughout the nuclear cycle and from various activities related to nuclear technology.



In this way we observe that the group of people who have taken part in the survey is diverse both in age and in experience and the type of activity within the nuclear sector.

11. STEM: Acronym in English for Science, Technology, Engineering and Mathematics.

3.2. Analysis of the collected data

This section presents a mapping of the perceptions of the respondents on gender equality in the nuclear sector, as well as the types of obstacles -obvious or invisible- to which women and non-binary identities stated they have been confronted with because of their gender.¹²

Perceptions about gender equality in nuclear sector institutions. 37.8% of those surveyed responded that their work teams are made up mostly of men, while 32.3% indicated that this is equal, that is, it is made up of men and women in an equitable manner and 30% said that their teams are mostly made up of women. However, when observing who holds the hierarchical positions of the nuclear sector institutions, 69.1% refer to men, 20.7% mention that the distribution is equitable, and only 10.1% indicate that these positions are held by women.

"In the Brazilian nuclear sector, between 5 and 10% of leadership positions are held by women, who unfortunately do not pave the way for others since they often feel threatened", Karla Kwiatkowski Lepetitgaland, senior expert, Eletronuclear, Brazil.

Regarding the participation and representation of women workers in the nuclear sector, 35% of the people surveyed consider that women represent less than 50%, 21.2% less than 30%, 15.2% less than 20%, 9.2% less than 5% and 7.8% less than 10%; while 11.5% estimate that women in the nuclear field represent half of the population (50%). ¹³

A large percentage of those surveyed consider that the nuclear sector is not duly aware of the need to promote the participation of women. Namely: 30.9% mention that the nuclear sector is close to this need, 28.1% that they are not even close and 21.7% directly indicate that they are not sensitized about the topic.

""The training of the entire nuclear community is essential to think about the structure from a different approach that prioritizes teamwork -as a basis for distributing tasks and solve problems collaboratively- and new forms of leadership away from the masculine and patriarchal model", Adriana Serquis, president of the National Atomic Energy Commission of the Republic of Argentina (CNEA).

^{12.} Note on the sample population: Although the survey was aimed at women and other non-binary or normative identities within the nuclear sector, 216 people out of 217 surveyed said they perceived themselves as cis women, and only 1 self-perceived as a non-binary person. In this regard, the analysis of the data expressed here is taken as representative of cis women because it does not have a representative sample population to make visible the experience of non-binary or normative people. [13. Although to date there is no data on the participation of women in the nuclear sector in LAC, a survey conducted by the Nuclear Energy Agency (NEA) of the Organization for Economic Cooperation and Development (OECD) in 2021, reveals that approximately 24% of all workers in the nuclear industry are women.

Obstacles and barriers in the nuclear sector. 7 out of 10 women who participated in the survey indicated that there are institutional barriers – whether tacit or explicit – for the permanence and promotion of women in the nuclear sector. In addition to this reality, there are the difficulties derived from the COVID-19 pandemic.



50.2% of those surveyed consider that the global health situation affected negatively and differently the participation of women in the nuclear sector.

"It is believed that pursuing a degree in the engineering field is not suitable for women, it is a representative role for men".

Some of the barriers indicated refer to: gender stereotypes or unconscious bias about the characteristics of leadership (36.5%); lack of women with a gender perspective in leadership positions (34.1%); sociocultural perceptions that nuclear energy jobs are for men (29.9%); the culture of the nuclear energy sector detracts from the participation of women (22.2%); the style of life, including being on call, and shift work, is not conciliatory with the care tasks that fall on women (19.2%); the requirements necessary for professional advancement are not conducive to working life (17.4%); uncomfortable atmosphere for women (11.4%); barriers that prevent to effectively

relate through social activities compared to male peers (10.8%) and lack of support or pressure from family or friends not to work in energy to discourage working in the nuclear field (2.4%).

"Women are disproportionately responsible for care tasks, assuming a double or triple workday".

It is interesting to point out that of the illustrated barriers, 36.6% are linked to care and reproduction tasks (a percentage obtained from the sum of 19.2% corresponding to lifestyle, including being on call, and shift work, is not conciliatory with care tasks that fall on women, and 17.4%, referring to the necessary requirements for career development, are not conducive to working life). In this regard, **women in the nuclear sector were asked if they consider that their work has been affected or could be affected by being in charge of people care, to which 54.4% responded affirmatively.**

In addition to the information collected in the questionnaire, a collective discussion instance was proposed called "SOMOS POTENCIA Laboratory: Gender Perspective in the Latin American Nuclear Sector" aimed at collectively thinking about new ways of inhabiting the nuclear sector in the region. This co-creation space had the contribution of 52 participants, among them: women from the LAC nuclear sector, members of the WiN ARCAL Chapter, National Coordinators and Project Project Counterparts of the ARCAL Agreement, women involved in ARCAL Projects and counterparts – women and men- of the Regional Project ARCAL RLA/0/069.

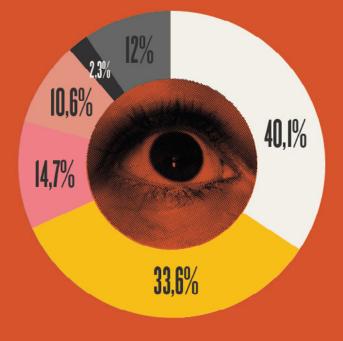
In this instance, family, social, institutional and subjective obstacles were identified through the life stories of the participants regarding their professional careers. Next, **an obstacles wall co-constructed by the participants throughout the mentioned instance is presented:**



have experienced or heard of attitudes or behaviours that are overtly or covertly violent towards women in the workplace

IDENTIFIED VIOLENCE

- Gender stereotypes, sexist humour, microaggressions, unconscious biases (40,1%)
- Psychological (33,6%)
- Economic property (14,7%)
- Sexual (10,6%)
- Physical (2,3%)
- Non-identified type (12%)



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From the analysis of the information collected, an important and urgent reality is evident: The majority of women within the nuclear sector (according to our sample population) recognize this sector as a space where violence -obvious or invisible- is committed against women.

Along with the results of the survey, the participants of the co-creation laboratory SOMOS POTENCIA evidenced the multiple obstacles and experiences of discrimination they face in their careers paths just because they are women. Even more, that discrimination is not an isolated event, but appears early in their lives, from the type of education girls receive to the kind of work to which they are relegated.

3.3. Testimonials

In order to complement the data analyzed above and considering the relevance of the women's own experiences and stories, we developed a series of in-depth interviews with four leaders from the region who hold leadership positions.

In the first place, Marcela Zulantay, ministerial adviser of gender in the Ministry of Energy of Chile, defines as a strong obstacle in the labor history of the women in the nuclear sector the attitude of some leader politicians and executives who do not break with the paradigms and still do not understand the value of team diversity. She states that what is required is a Human Rights and Gender Area that develops clear guidelines for all institutions in the energy sector and that enhances the current Work Group whose task has been to make recommendations.



Karla Kwiatkowski Lepetitgaland, research, development and innovation coordinator and senior expert at Eletronuclear, Brazil, accepts the devaluation of the supporting areas - where most women actually work - as another relevant problem.

"I always say that for science to exist, as well as nuclear power generation, we need a lot more than STEM disciplines. We need to get financial resources, sign contracts, sell, buy, manage knowledge, make alliances, and so many other actions in which women have full participation. So when they say that there are few women in the sector due to low representation in STEM, this is not sufficient ground to justify what really happens".



Karla Kwiatkowski Lepetitgaland



Adriana Serquis

For her part, Adriana Serquis, current president of the National Atomic Energy Commission (CNEA) of the Republic of Argentina, emphasizes that *"it is necessary to change the approach that understands the problem as an individual matter and normalizes the idea that in the nuclear sector there are those who have chosen to be there and that if any woman does not reach certain hierarchical positions this is because they do not have the required capabilities"*. In this way, she is convinced that it is essential to understand that it is a social and institutional issue to advance in the development of effective measures aimed at modifying unequal conditions.

Likewise, Alba Guillén Campos, founder of the National Center for Nuclear Security of Cuba in 1991, current Directorate of Nuclear Safety, highlights that some bosses fail to understand women assuming motherhood. "The biggest obstacle is to have the time required for professional training as well as to be recognized and respected; there is still a lot of domestic and family overload of task on women".



Alba Guillén Campos

In this regard, **Adriana Serquis** stresses that "the CNEA has been a pioneer in setting up nursery schools", which was fundamental for her to get access to a place where her son and daughter would be cared for and thus she could be able to finish her PhD. In this sense, she indicates the importance that "this type of measures was achieved through collective effort and it is essential that they are institutionalized." Analyzing the actions still pending in this matter, she considers an important step the issue of co-responsibility in child-care is under discussion, although it is not enough.

Finally, the points of view of the four interviewees are getting to glimpse a promising future, largely thanks to the leading role of young women, who have had an active part in promoting the cultural change that is required to achieve an impact forceful against such deep-rooted cultural beliefs: "They represent the talents that will nurture decision-making positions in the coming years," says Marcela Zulantay.

In this sense, **Marcela** also highlights the strengthening of networking as essential, as well as the consolidation of new forms of leadership: "*The referents have to leave the lab, as it is not enough to be satisfied with the daily work or the diplomas hung on the walls*". It calls for a change of narrative with firm conviction: "*Working in a sector as extraordinary as the nuclear one makes us unique. We are capable women and founders of a movement with an irreversible transforming power*".



Mapping of existing tools for gender equality in NNIs

This section explores the legal frameworks in force for gender equality in the NNIs, together with the tools and self-managed organizations that work to guarantee the rights of women in the nuclear sector. The analysis of the Institutional policies and the most relevant self-managed tools for our mapping is detailed as follows.

4.1. Institutional Policies

As a main point, it is worth noting that 62.2% of the women in the nuclear sector surveyed warn that senior positions do not express - or do not do so enough - their commitment to gender equality. According to their perceptions, they consider that the impact of policies and programmes aimed at supporting and promoting the participation of women in the sector is not analyzed either.

Regarding institutional policies aimed at providing training related to gender, equality and inclusion issues, **7 out of 10 women surveyed stated that they had not received any training related to the gender perspective and/or women's participation in the nuclear area**. This reality highlights the need to generate policies formulated to raise awareness and train staff regarding these issues.

60.8% of the people interviewed mentioned that despite not having received any direct training, they admit that the existing gender policies/tools/initiatives in their workplaces have helped them -to a greater or lesser extent- to excel in their careers in line with their male colleagues.

Among the existing initiatives or tools on gender equality in the NNIs of the region, known by the women and diversities surveyed, the following stand out:

19.4% report to have appropriate nursery/lactation rooms, specially conditioned, decent and hygienic for workers to breastfeed or pump their breast milk during working hours, ensuring its correct conservation and favouring the continuity of breastfeeding.

19.4% remark the existence of economic subsidies for children in kindergarten or day care.

- ▲ 17.5% indicate that offers of vacant positions with a gender perspective are actively implemented, reflecting the intention of the organization to provide equal opportunities for women and men to access all positions.
- 17.1% mention the existence of regulations to make on-site working hours more flexible in cases of children's illness.
- **16.6%** of the people interviewed mentioned having an extension of the breastfeeding period as an institutional policy.
- Only 16.1% confirm the existence of adequate facilities in the workplace that take into account the differentiated needs of women (changing rooms, bathrooms, availability of uniforms in different sizes, among others).
- 12% are aware of the existence of a mechanism (commission, referents) in charge of receiving and monitoring cases of discrimination based on gender and sexual harassment.
- Only 9.2% state that there is a training policy with a gender perspective in their workplaces.
- 8.3% expressed that there is a specific institutional policy in charge of regulating the prevention, punishment and elimination of sexual harassment in the organization based on national legislation.
- 6.5% of those surveyed comment that at their workplaces there is a manual on the use of inclusive language in official communications.
- Only 6% indicate the existence of a procedure manual with a gender perspective for the recruitment of personnel, with the purpose of minimizing possible gender bias in the selection, minimizing discretion.

4.6% mention that there are incentives to promote equal participation of men and women in training to ensure equal development of professional skills.

▲ Only 3.7% of the women interviewed admit that there are mechanisms to reconcile care tasks and women's productive time. In turn, only 3.2% assume that in their organizations there is a written co-responsibility policy that guarantees the conciliation between work and family life and implements measures so that women and men can develop their professional careers without impact on their family responsibilities.

In addition to the policies surveyed, some of the people interviewed expressed that within their workplaces there have been other initiatives aimed at promoting gender equality such as talks, conferences and institutional events on gender issues and mentoring programmes.

4.2. Self-managed Tools

Among the self-managed tools, special emphasis is placed on the participation in women's networks such as **Women in Nuclear (WiN)**, self-convened women's groups and support spaces between peers.



Among the tools that respondents believe would be effective in creating inclusive work cultures that value the diverse contributions and leadership of women, the following were noted:





Mapping of existing tools for gender equality in the LAC region

This section explores the legal frameworks in force for gender equality in LAC, as well as the tools and self-managed organizations that work to guarantee the rights of women in our region. The analysis of public policies and the most relevant self-managed tools for our mapping are detailed below.

5.1. Public politics

The LAC region is made up of 42 countries: 21 in the Caribbean, 7 in Central America, 13 in South America, and 1 in North America. Most countries have specific laws to guarantee women's rights and promote gender equality that address women's autonomy, with a marked difference between the Caribbean countries with Anglo heritage and Latin American countries with Spanish and Portuguese heritage.

In the LAC countries, there is an evolution in the characteristics of the laws regarding the autonomy of women, from instrumental laws in the 1980s to laws with a human rights and gender perspective in the 2000s. Much of this legislation is the result of the militancy of the feminist movements and the demands from international instruments promoted by multilateral organizations, such as the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW).

Out of the 42 LAC countries, 35 have a total of 230 laws related to care, most of which have to do with maternity protection; in a few cases, co-responsibility in care is explicitly expressed. This category and that related to laws against violence (383 laws in 40 countries) make up the majority of laws for women's equality. In the region, women spend between 12% and 25% of their time on unpaid domestic tasks, while men spend between 3% and 12% of their time.

Few countries have laws that address the issue of the wage gap, imposing obligations to eliminate the wage gap between women and men in paid jobs.

In the region, **28% of women do not have their own income in contrast to 12% of men.** Likewise, few countries have laws that eliminate discrimination in the process of access to employment. Women have an average unemployment rate in LAC of 9.3% against 6.9% of men (2019 data that might have been modified due to the SARS-CoV-19 pandemic).

The average wage gap in LAC, according to what is indicated by the International Labor Organization (ILO), is around 15%, with large internal regional variations and a decreasing evolution over time.¹⁴



On the other hand, 25 have equality plans, "instruments used by most of the countries in the region, and promoted by the mechanisms for the advancement of women, which allow guiding the actions of the State and planning and carrying out a process joint work between the different sectors, promoting the institutionalization and mainstreaming of gender." ¹⁵

14. The wage gap between men and women in Latin America: On the road to equal pay. Lima: ILO / Regional Office for Latin America and the Caribbean, 2019. 108 p. (ILO Americas, Technical Reports 2019/16) ISBN: 978-92-2-132054-8. | 15. ECLAC Gender Observatory, https://oig.cepal.org/ es. Last accessed 4/26/2022



The women's movement in LAC has a long and rich history.

There are innumerable women's organizations that fight for the rights of the inhabitants of the countries of our region. These organizations run shelters for women victims of violence, providing work and financial training, legal advice, lobbying in favour of laws with a gender perspective, fighting against trafficking of women for prostitution and slave labour, women's trade unions, popular economy activities, support for women in the rural sector, advice on sexual and reproductive health, among many other actions.

The campaign in favor of the Voluntary Interruption of Pregnancy Law in Argentina; the movements "Not one less" (2015) and "Me too" (2017); the international women's strikes; the participation of the women's movement in the protests in Chile (2019); the slogan "the skirt is respected" in Bolivia (2019); they are examples of the political agency of LAC women, which begin in one territory but quickly acquire a regional and global scale.

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Collective strategies to devise new ways of inhabiting the nuclear sector

The strategies presented in this section were proposed collectively in the framework of the laboratory instance **"SOMOS POTENCIA: Gender Perspective in the Latin American Nuclear Sector",** -mentioned above in section 3.2.- that had the valuable contributions of 52 participants, who jointly thought and explored new ways of inhabiting the nuclear sector in the region.

In this laboratory, based on a two-step dynamic, we set out, on the one hand: to analyze and name the obvious and invisible obstacles that women face within the nuclear sphere in LAC, based on their personal experiences and life stories. To make a collective visibility of these obstacles, the co-creation of a mural of barriers of different kinds (family, social, institutional, personal, political) was carried out.

This mural shows those (barriers) that directly hinder the participation of women in the nuclear sector. On the other hand, we managed to design a map of inclusive tools and strategies that put at the center the differentiated needs of the diversity of women in the nuclear sector, thus seeking not only to overcome the obstacles identified, but also to build and propose ways to enhance the equal, free and full participation and leadership of women.

Above all, the fundamental information was based on the data provided from the previously mentioned survey, in the framework of which the people interviewed were asked to outline strategies they would consider necessary and effective to create inclusive work cultures that value the diverse contributions and the women's leadership. In this regard, **53% of the interviewees mentioned the need to provide regular training for the entire organization to identify and counteract gender stereotypes, unconscious prejudices and microaggressions**.

Furthermore, **34.1%** of the interviewees pointed to the urgency of establishing gender equality as a portfolio for executive management, including regular reporting and accountability. Related with this idea, 22.1% of them expressed the need for performance evaluations, job offers and other human resources materials that should be included to encourage the participation of women in the nuclear sector. Likewise, **32.3%** of them manifested the will to launch periodic internal and external campaigns that promote the current and historical contributions of women to the organization and to the field of nuclear energy. Finally, to guarantee the effectiveness of the proposals, 29% of those surveyed stressed the need to periodically survey employees and use specific groups of women at different organizational levels to monitor the work culture and develop new initiatives that address these issues and enhance women's contributions to the organization.

Taking into account the results of the survey, the life experiences and the obstacles derived from their career paths that were narrated by the laboratory participants, a series of actions (self-managed and institutional) recommended within the nuclear sector are proposed below; these aim at promoting the inclusion of the gender mainstreaming at all levels of said sector and, consequently, motivating the active, leading and equal participation of women.

6.1. Self-Managed Actions

A. Women's Network

One of the main obstacles collectively identified by women in the nuclear sector was the constant fear and shame they experience in their workplaces when they make a contribution to work, not to mention when they raise their voices in a situation of discrimination or violence. This has to do, as they say, with the little or no validation given to their experience. This obstacle is directly correlated to gender, since, in their professional experiences, they highlight that their contributions are underestimated compared to those of their male peers. The direct consequence of this impediment is low self-esteem at work and the little participation of women in discussion spaces.

"We keep silent out of fear, shame or because our contributions are not validated."

As a strategy to overcome this barrier and in line with the self-managed tools mentioned in point 4.2., it is proposed to build a women's network, which would be constituted as a safe support and containment space between various women in the nuclear sector with the purpose to identify, name and recognize the obstacles they face in the NNIs and to be able to share strategies that enable them to strengthen their

professional actions, expand their support networks and increase their participation. Although it is proposed that this network is recognized as a self-managed space by the women themselves, the importance of institutions promoting the construction of these spaces as an institutional policy is highlighted, assuming the responsibility of creating environments that allow the effective, equal and full participation of women.

In this regard, it is worth mentioning the role that **WiN Global** has played within the nuclear sector as a "women's network for women", thus encouraging intergenerational and interdisciplinary instances that facilitate exchange and support among peers. In particular, WiN ARCAL, the chapter of said network in the region, stands as a framework to boost these spaces in LAC, as well as in each of the countries of the region, by promoting, at the same time, the creation of national chapters that meet the specific needs experienced by women in the nuclear sector in each nation.

In this sense, it is relevant that the institutions provide access to networks such as WiN and keep updated on the initiatives promoted by them. Likewise, these networks constitute enriching collaboration spaces in which NNIs can find valuable resources in terms of design and implementation of strategies and actions, especially by complementing efforts and avoiding duplication in the case of tools that are already being executed by groups such as **WiN ARCAL** or its national chapters.

"The participation and articulation of women in masculinized sectors is highly positive because it is a way to break with the profiles/roles attributed to women socially, and furthermore, one of the notorious inequalities is the economic one: women are poorer than men and therefore, the fact that women are able to access to and remain in these sectors helps reduce the economic gap".

"I think it is a virtue to find more women in the sector, because many times a different and closer empathy is developed, which allows us to recognize ourselves as peers and build up networks among us, since we have the same experiences, problems and many are starting to see that these are situations related to gender and not to work skills or attitudes".

6.2. Institutional Actions

A. Comprehensive institutional plan "Make Equality Visible" to implement management policies for the inclusion of women in the nuclear sector

An obstacle considered a priority by women in the nuclear sector is linked to the biases that exist for the hiring of women or for the full insertion of women employed within the nuclear field. They point out that there is an unequal evaluation of men for vacant positions because in the collective imaginary –popular belief- the idea is retained that men place professional success first in their life project, while in the case of women it is presumed that they have care tasks as a priority, which has generated a stigmatization for the incorporation of women within the nuclear sector.

"They assume that because we are women we are not going to have work as a priority.".

As an institutional initiative to deal with this obstacle, women in the nuclear sector propose the implementation of an institutional plan at all levels whose purpose is to implement management policies for the inclusion of women in each of the areas of the nuclear sector (from workshops and panels to executive spaces).

ESSENTIAL PRACTICES TO CARRY OUT THIS ACTION

1. Guide of impact indicators with a gender perspective: Introduce an implementation guide with indicators expected every six months and with the requirement of periodic and public disclosure of the results achieved.

2. Institutional policy of sanctions for non-compliance with the principles of equality and inclusion: Establish clear procedures aimed at sanctioning those responsible and redressing the victims, in order to eliminate impunity and promote safe spaces in the nuclear sector. Establish specific sanctions with the purpose of achieving critical gender awareness at the institutional level, which must strive for women's labour inclusion in the area and recognize their differentiated contribution to the nuclear sector.

3. Recruitment and promotion policies committed to gender parity and bias free: Job descriptions need to be reviewed, eliminating unnecessary requirements, taking careful account of language choice, and prioritizing skills and qualifications over years of experience, are some measures that can encourage more job applications from women. Likewise, it is important to require diverse personnel selection panels. ¹⁶ Other concrete examples are linked to the development of a new CV format that seeks to reflect the contributions and comprehensive trajectories that enrich people's career paths, such as mentoring, dissemination and spreading activities, work within committees; thus leaving the traditional emphasis on the lists of publications that reveal the strong gaps in the trajectories of women associated with motherhood. ¹⁷

B. Conquer Power: global campaign (institutional and cultural) to promote the participation of women in the nuclear sector

One of the obstacles perceived by women in the nuclear sector is the low participation of women in job contests or job vacancies; they mention that this is mainly due to the socialization of the nuclear sector as a space for men, to women being excessively demanded and to the lack of visibility of women referents within the nuclear sector.

"Representation matters. We do not have women referents in the Board of Directors".

To deal with this obstacle, they propose to launch continuous campaigns that include a series of actions focusing not only on the institutional, but also on the cultural approach. The campaign aims at promoting a narrative that questions and decentralizes power from men, especially in those spaces historically dominated by male peers, such as the nuclear sector. In this sense, it seeks to reinforce gender awareness at the institutional level that, on the one hand, truly understands that the inclusion of women brings sustainable value to institutions and work teams and, on the other hand, a campaign that helps to tear down myths related to gender roles that have been instilled in women and that have led them

16. WINS (2021) International Best Practice Guide on Advancing Gender Parity in Nuclear Security, Viena. 17. https://www.nature.com/articles/d41586-022-00928-4 to desist from job applications because of being unmotivated by gender stereotypes or by the low participation of other women who serve as career referents.

Taking up this same idea, it is also proposed within the campaign to create a Directory of Women in the nuclear sector that promotes the visibility and recognition of women so that this can become an example to follow for other women and girls.

"The greatest virtue of a woman in the nuclear sector is being able to be an example and reference for girls and women who wish to develop professionally in the field of STEM studies".

ESSENTIAL PRACTICES TO CARRY OUT THIS ACTION

1. Approach based on data disaggregated by gender: The existence and accessibility of data disaggregated by gender, based on the establishment of a variety of instruments, is essential to design effective strategies, as well as to overcome potential resistance and to monitor and evaluate achievements.¹⁸ Assess the performance of an organization based on the definition of gender indicators at the institutional level, such as the number of women hired, promoted or trained during the course of the year, or the salary they receive, including total compensation packages, allows regular monitoring, comparison and contrast of progress over time and between sectors. Likewise, it is another way of generating commitment and transparency around gender equality at all organizational levels.

2. Area responsible for gender equality: It is necessary to institutionalize an area responsible for promoting gender equality within the organizations, made up of personnel specialized in the matter who can propose plans adjusted to the needs of each NNI, accompanied by action routes for its effective implementation. These types of programmes are implemented by instances such as the Gender Equality Observatory for Latin America and the Caribbean, which presented road maps for the development of Gender Equality Plans in Latin America and the Caribbean.¹⁹

.18. EIGE (2016) Gender Equality in Academia and Research – GEAR Tool: https://eige.europa.eu/publications/gender-equality-academia-and-research-gear-tool. Last access: 04/25/2022. | 19. Gender equality plans in Latin America and the Caribbean. Road maps for development. https://www.cepal.org/sites/default/files/events/files/plans_de_ igualdad_de_genero_en_america_latina_y_el_caribe._mapas_de_ruta_para_el_desarrollo.pdf. Last access: 04/25/2022.

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C. Gender Seminars

Another of the obstacles encountered by women in the nuclear sector within the laboratory was the difficulty in "gaining respect, validation and appreciation in the work environment by their male peers". The participants report that as women they have to put in a greater effort to prove their mastery of knowledge compared to men and that, often, because they are women in a space mostly occupied by men, they are asked to take on administrative tasks such as taking notes, serving coffee or directing other activities related to care or service, thus reinforcing gender roles and minimizing their participation.

They give us more administrative responsibilities because women are "orderly". Faced with this reality expressed by the participants, it is collectively proposed as an institutional policy to carry out a programme made up of gender seminars within the NNI, guaranteeing the active participation of men, with the objective of promoting actions to build new masculinities through the reconfiguration of scenarios aimed at reinforcing the technical, cultural and institutional value that women provide to the nuclear sector, as well as raising awareness of the need to set up diverse and equal teams, panels and working groups, free of stereotypes and traditional gender roles.

"We have to demystify the idea that only men can carry out activities in the use and management of nuclear energy; women also have the ability and training to play a great role within this area".

ESSENTIAL PRACTICES TO CARRY OUT THIS ACTION

1. Instances of awareness and permanent and compulsory training on gender equality addressed to authorities and decision makers. For example, in Argentina, the Micaela Law N°. 27.499²⁰ establishes mandatory training in gender and gender violence for all people who work in public office, in the Executive, Legislative and Judicial branches of the Nation.

• 2. Commitment to parity in outreach and training activities: It is key to facilitate opportunities for equal participation in outreach and training instances. The active involvement of expert women sends a crucial message to the audience about the role given to women, as well as the relevant experience they have.

20. Micaela Law No. 27,499: https://www.argentina.gob.ar/generos/ley-micaela. Last access: 04/25/2022.

D. Training in nuclear science and technology with a gender perspective

Another barrier highlighted by the participants in the laboratory was misinformation and ignorance about nuclear sciences and technologies from a gender perspective; they report that there is a wrong perception in society, in general, and even within the nuclear sector itself, which fosters the idea that it is a dangerous area for women or that it does not reconcile with aspiration of women or with the roles commonly associated to women. This has to do with the lack of understanding around nuclear sciences and technologies from a perspective that includes women, since historically it has been an area thought, designed and developed from the experience of men, thus making invisible the different paths taken by women.

As a result of this misinformation, they point out that the few policies that end up being implemented within the institutions are usually for mere administrative compliance, without really achieving comprehensive gender awareness that has a positive impact on the lives and careers of women in the nuclear sector. Along the same lines, they highlight the lack of strategies that encourage the demystification of biases around the nuclear sector and encourage the involvement of more women in it.

"The issue of gender is not given enough space in the institutions, but it is raised rather to fulfill the paperwork."

As an initiative to deal with this obstacle, it is proposed to install as an institutional policy training that allows us to re-think nuclear sciences and technologies from a perspective that places the equal participation of women at the center, makes them visible as active actions subjects and questions the traditional labour norms that have perpetuated the exclusion of women. Moreover, this different perspective seeks to collectively promote flexible work methodologies that enable women to be fully integrated to work, apart from assuming responsibility of care tasks and other related to motherhood.

ESSENTIAL PRACTICES TO CARRY OUT THIS ACTION

1. Continuous professional development: It is essential to develop training, leadership and mentoring programmes to provide key instruments for permanent professional development, promotion, retention and women access to decision making positions. They must be designed from an inclusive perspective, considering that women do not compete on equal terms from the beginning and the particular situations of pregnant people, as an example. In this regard, as a concrete and effective action it could be highlighted the policy dictated by the CTI Pro-Women Committee of the National Council of Science, Technology and Technological Innovation (CONCYTEC)²¹ of Peru in the year 2020. As a gender equality policy this established that the evaluation score for female researchers with children up to 5 years old should make up for the years that they have not published due to pregnancies and parenting, so that it does not affect the final score.

2. Care policies without gender bias: Taking leave for family reasons available to all staff, evaluation strategies that take into account the biases introduced by care activities, both for sons and daughters and for people with disabilities and older adults. These policies must also include the expansion of paternity leave in order to balance domestic tasks in the household and child care facilities for daughters and sons of the staff, which are available from the institution.²²

E. Institutional regulation with a gender perspective

One of the shortcomings identified as a critical factor within the nuclear sector is the lack of legislation and the absence of application of gender mainstreaming in the Institutions. The participants indicate that many of the institutions of different LAC countries are backward internally: Since this area is a space traditionally dominated by men, with a very strong status quo and with normalized patriarchal practices, and, although societies abroad seem to be advancing with respect to gender equality, within the LAC institutions this change is not perceived, even though there are norms and good practices in the region which are already being implemented.

"There is a lack of legislation and lack of application of gender equality."

21. National Council for Science, Technology and Technological Innovation. https://portal.concytec.gob.pe/index.php. Last access: 04/25/2022. 22. "Nuclear non-proliferation: women, leadership and networks in Argentina", p.30, Nuclear Regulatory Authority of the Republic of Argentina, Buenos Aires, Argentina, 2021. Having evidenced this reality, it is proposed to implement mandatory institutional regulations with a gender perspective that ban discrimination and inequalities based on gender, sex and sexual orientation, among other categories. For the elaboration of this regulation, the proposal is to adopt an intercultural outlook that takes existing legal and regulatory frameworks with a gender perspective in other countries of the region and other institutions as a reference, as well as good practices and their indicators of success and impact that can serve as a model for each of the countries considering their context and culture.

ESSENTIAL PRACTICES TO CARRY OUT THIS ACTION

1. Zero-tolerance policies in terms of harassment and intimidation: It is crucial that the staff is aware of the mechanisms to report violence, as well as providing a safe space for victims in which they are offered the necessary comfort and containment to be able to report it and address it comprehensively. We can see that this type of commitment has already been implemented by other areas at the regional level, such as the Declaration of Zero Tolerance²³ towards gender violence at the Higher Education level signed by the Network of Macro-universities of Latin America and the Caribbean in 2021. There are also regionally recognized tools that can be taken as a reference in NNIs, such as the CIM-OAS and the Model Protocol to prevent, address, punish and eradicate violence against women in political life.²⁴

23. UNAM (2021). Zero tolerance for gender violence, declare macro-universities of Latin America and the Caribbean https://www.udual.org/ principal/2021/12/13/unam-tolerancia-cero-a-la-violencia-de-genero/ Last access: 04/25/2022. | 24. CIM-OAS. MODEL PROTOCOL FOR POLITICAL PARTIES. Prevent, address, punish and eradicate violence against women in political life. https://www.oas.org/en/cim/docs/ViolenciaPoliticaCreate programmes that promote the employment of women, eliminating gender bias and normalized stereotypes in society that contribute to their exclusion from the nuclear sector.

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Continuously and permanently train and evaluate personnel in charge of recruitment processes to avoid gender biases that prevent the hiring and promotion of women within the nuclear sector.

Hold awareness workshops for all staff on gender mainstreaming, sexist humour, gender violence and other issues relevant to women in order to eliminate existing gender biases in the work spaces where women work.

Develop internal protocols that consider the equal participation of women in activities corresponding to the nuclear sector, such as: talks, congresses, conferences and other academic activities with the purpose of promoting the participation of women and gender parity in said sector.

Establish action routes to address gender-based violence against women and non-binary identities intheworkplace. This protocol must contain specific mechanisms of action against the aggressor and protection measures to avoid the re-victimization of the complainants.

e recommendations were created collectively by the women who participated in the SOMOS POTENCIA Laboratory.#SomosPotencia



Recommendations to

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Promote the creation of safe spaces and selfmanaged networks for women to assert their leadership and the development of collective strategies aimed at their professional growth.

Launch communication campaigns aimed at debunking the myths surrounding the participation of women in the nuclear sector with the purpose of motivating their labor insertion.

Develop and implement an institutional guide for the promotion of communication with a gender perspective.

Give visibility to women who are part of the nuclear sector as a means of creating references and ensure the representation of women within this field.

Constantly publish open data regarding policies aimed at the inclusion and equal participation of women within NNIs.

Demand accountability from each managerial management in order to measure and analyze the situation and context regarding women within NNIs every six months.

Demasculinize the narratives of power that perpetuate gender inequalities and underestimate the differentiated contribution that women provide to the nuclear sector.

08. Final considerations

We are facing a historic opportunity, in an international and regional context in which innumerable women's organizations fight for a fairer, more representative and equal society in every activity they engage in. The search for equality is a collective path to be traveled by all women, in all spaces, with the nuclear industry not being the exception.

Gradually, countries and institutions have been implementing very dissimilar advances in terms of gender equality. The various actions that have been launched constitute elements of a multiplier synergy at the regional level that starts from the premise of gender equality as a fundamental human right. From this approach, the NNIs must **necessarily make the full commitment to working towards strengthening their capacities and their sustainability based on the promotion of the active and full participation of LAC women in the sector.** This project has made it possible to create innovative instances with gender awareness to propose planning and management actions co-constructed by the NNIs workers themselves. These workers built themselves as political subjects and moved away from practices that reduced their participation to mere objects of research or category of analysis, thus making visible the leading role of women within the nuclear sector. **The process made it possible to value new forms of leadership, forge female bonding in order to recover their identity and their plural knowledge, and enunciate new ways of inhabiting the nuclear sector, far from the patriarchal model that has historically been established in all spaces dominated by men.**

SOMOS POTENCIA is published with the intention of **making an accessible tool available so that all the people who are part of the nuclear sector can get hold of it and take it to their action spaces to promote conversations and change perspectives**, understanding that walking the path towards gender equality and towards a life free of gender-based violence in the nuclear sphere of LAC contributes to the sustainability of NNIs and involves action in multiple areas, levels and scales.

With the creation of this guide, a window opened and revealed that the mere political will to accept women as parts of a whole is not enough. It became clear that we are faced with the urgent need to offer instruments that promote awareness and sensitization within the nuclear sphere. Instruments that guarantee not only a fair path and free of gender bias for the women who work in it, but also an active place at the decision-making table for the next generations of women, thus ensuring a diverse, inclusive and sustainable development of the nuclear sector.

WITHOUT FINDER EQUALITY IN THE NUCLEAR SECTOR, TODAY WE WILL NOT BE ABLE TO HAVE

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A SUSTAINABLE AND EQUAL

TOMORROW

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