

Gender STI

Good practice brief of gender in bilateral and multilateral STI agreements

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LIST OF ABBREVIATIONS

ABC	Agência Brasileira de Cooperação (Brazilian Cooperation Agency)
ACE	Action for Climate Empowerment
AECID	Agencia Española de Cooperación Internacional para el Desarrollo (Spanish Agency for International Development Cooperation)
CIHR	Canadian Institutes of Health Research
CMA	COP of the Parties serving as the meeting of the Parties to the Paris Agreement
CMP	COP serving as the meeting of the Parties to the Kyoto Protocol
CNPq	Conselho Nacional de Desenvolvimento Científico e Tecnológico (National Council for Scientific and Technological Development)
CONACYT	Consejo Nacional para la Ciencia y Tecnología (National Council for Science and Technology)
CONICET	Consejo Nacional de Investigaciones Científicas y Técnicas (National Council for Scientific and Technical Research)
COP	Conference of the Parties
CSTD	Commission on Science and Technology for Development
EDI	Electronic Data Interchange
EEA	European Economic Area
EU	European Union
FAPESP	Fundação de Amparo à Pesquisa do Estado de São Paulo (São Paulo Research Foundation)
FECYT	Fundación Española para la Ciencia y la Tecnología (Spanish Foundation for Science and Technology)
FFP	Feminist Foreign Policy
FLACSO	Facultad Latinoamericana de Ciencias Sociales (Latin American Social Sciences Faculty)
GE	Gender Equality
GEDC	Gender Equity and Diversity Committee
IUCr	International Union of Crystallography
KAIST	Korea Advanced Institute of Science and Technology
NITI Aayog	National Institution for Transforming India
NSERC	Natural Sciences and Engineering Research Council
R&D	Research and Development
R&I	Research and Innovation
RUTE	Red Universitaria de Telemedicina (Telemedicine University Network)
SCGES	Standing Committee for Gender Equality in Science
SSHRC	Social Sciences and Humanities Research Council
STI	Science, Technology and Innovation
UNFCCC	United Nations Framework Convention on Climate Change
USA	United States of America
WP	Work Package

EXECUTIVE SUMMARY

The GENDER STI project seeks to provide innovative solutions to address the complex challenges of incorporating a gender perspective into Science, Technology, and Innovation (STI) discussions with third countries. Through the application of design thinking and a human-centred problem-solving approach, GENDER STI explored the extent to which gender equality is taken into account in international cooperation dialogues within the STI realm, encompassing not just the European Union but also select countries on a global scale.

The second Work Package of the project aims to analyse how gender equality and its promotion is considered in bilateral and multilateral STI agreements.

In this context, this deliverable collects the insights from the Work Package, gathering a selection of good practices that were identified during the work. It is not intended to be a complete list of good practices, but rather to provide an overview of practices that have shown good results or are expected to do so in the future.

A total of eight such good practices have been identified, either applicable at: (i) The preparation and composition phase of relevant agreements phase, or (ii) The operationalisation and monitoring phase. These good practices are the following:

Preconditions on the equal participation in preparation and implementation – Establishment of preconditions in all STI agreements that set requirements for the organization to be able to be part of the agreement, in terms of gender equality, such as having a Gender Equality Plan.

Explicit Inclusion of Gender Equality Clauses – The inclusion of explicit gender specific clauses in the international cooperation agreements where the parts agree the development of some policies which aim to gender equality. This is for instance the case of countries with a Feminist Foreign Policy, which consider gender in all their diplomatic relations.

Gender Advisory Units on the Institutions – The existence of a gender advisory unit, department or committee, within the organizations, that helps to include gender in all their activities, including agreements, through providing their specialized insights.

Mentoring Programmes - The development of mentoring programmes that will have a positive impact on gender equality. These can be designed either for policy makers, raising awareness for the importance of taking gender issues in consideration when they negotiate or implement an international agreement, either just for women in STI, so they are inspired by role models and are able to overcome all the gender associated barriers.

Set targets to increase the number of women in STI – The setting of a quantitative target for gender inclusion in the agreements, so organizations know what aspects they should consider and prioritize regarding gender issues, and give them the needed motivation to meet the target. This can also lead to a simpler monitoring process.

Measures to Prevent Gender Biased Research Outcomes – Scientific research outcomes tend to reproduce the gender bias of the team that conduct the research. Thus, this good practice involves developing actions that prevent this and so ensure that the results are as gender neutral as they can. Including these measures when negotiating and implementing STI programmes should be taken into account.

Specific Incentives to Promote Women's Involvement in the Project's Activities – The involvement in the project's activities also tend to reflect the existing gender bias in STI field. So, it is important to specifically foster women's participation, e.g. through offering incentives. These incentives need to be clear when we implement STI programmes, for example, to finance projects.

Collection of Gender-Disaggregated Data – Gender disaggregated data is key to analyse the gender equality status of any organization, as well as for understanding equal participation at the international level. Although, often it does not exist, as it was not collected. So, collecting it is a good practice. It can go from simply analysing the gender composition of boards and participants to analysing the proportion of speaking times.

1 INTRODUCTION

Gender inequality remains a problem to be solved in the STI field, and the gender perspective is often not included in STI dialogues and agreements despite it is recognised that such inclusion has a positive impact on gender equality and, ultimately, on gender mainstreaming. Gender bias can lead to horizontal segregation i.e. disparities among different scientific disciplines, and vertical segregation, i.e. low levels of female representation in top positions. The European Commission considers gender equality in STI as a priority (Ljubljana Declaration).

The GENDER STI project seeks to provide innovative solutions to address the complex challenges of incorporating a gender perspective into Science, Technology, and Innovation (STI) dialogues with third countries. Through the application of design thinking and a human-centred problem-solving approach, GENDER STI explored the extent to which gender equality is taken into account in international cooperation dialogues within the STI realm, encompassing not just the European Union (EU) but also select countries on a global scale.

The investigation was conducted along the three objectives of the Gender Equality strategy in EU R&I¹: gender equality in scientific careers, gender in decision making, and gender in R&I content. During this research, several good practices were identified, that effectively led to positive results where they have been introduced.

Under Work Package 2 “Comparative analysis and benchmarking on gender equality in STI dialogues”, an analysis of cases and realities all over the world was carried out. This included a large number of interviews, in which several STI stakeholders gave their perspectives on gender issues, how their organizations and countries deal with them and what efforts are being made to achieve gender equality in the STI field.

This deliverable aims to collect a series of good practices, presenting them in a short and comprehensive way, so they can be used and adapted to every context.

These good practices are split into two major groups.

- The first group is related with the preparation and composition of STI agreements. This includes good practices to be applied when developing agreements, topics that should be addressed and issues to keep in mind at this phase.
- The second group focuses on the operationalisation and monitoring of the agreements. This includes policies that can be applied at the implementation phase of the agreements and even in the monitoring phase, in order to better assess the practice’s effects.

This structure includes information from the interviews that were performed during the project in Work Package 2. These collected insights from the application of gender related policies internationally. Each good practice is presented by means of a short description, including its objectives and the challenges it may need to overcome, as well as by some examples of agreements and projects/programmes in which it is already being applied. It also includes interview quotes that refer to the implementation of the good practice and its results, including the stakeholder’s insight on how the practice could have good effects even if not yet implemented.

¹ Available at https://research-and-innovation.ec.europa.eu/strategy/strategy-2020-2024/democracy-and-rights/gender-equality-research-and-innovation_en#:~:text=Events-.The%20Commission's%20gender%20equality%20strategy,equality%20across%20all%20EU%20policies

2 BACKGROUND

This document is part of Work Package 2 “Comparative analysis and benchmarking on gender equality in STI dialogues” of GENDER STI project, that aims to perform a deep analysis on gender equality and to define the features and any other elements that will contribute to identify and remove potential cultural and institutional barriers that hamper the integration of the gender dimension in international dialogues and cooperation in STI.

The specific objectives of this WP include:

- Perform a qualitative analysis of the screening and survey findings of WP1 to further understand how gender equality is taken into account and promoted at different levels in bilateral and multilateral STI agreements.
- Gather insights from stakeholders on gender inequalities in STI across Europe and selected third countries.
- Identify barriers and success factors that affect the integration of gender equality in dialogues with third countries in the area of STI

This **Deliverable 2.3** “Good practice brief of gender in bilateral and multilateral STI agreements” aims to provide a brief of gender in bilateral and multilateral STI agreements based on selected case studies and success stories, including an inventory of good practices.

The development of the document was based on the research done by the project partners under the following tasks:

- **Task 2.1** Criteria and indicators for comparative analysis
- **Task 2.2** Insights from stakeholders
- **Task 2.3** Benchmark analysis

The implementation of these tasks resulted in the elaboration of two previous deliverables, which were used as a starting point for D2.3:

- **Deliverable 2.1** “Overview of gender inequalities in STI agreements between EU and third countries”, that presents the insights gathered through in-depth interviews with key actors in MS, AC and third countries.
- **Deliverable 2.2** “Benchmarking report on gender equality in STI dialogues” focuses on the integration of gender in international STI collaboration and draws lessons from international gender equality and feminist policy principles.

In addition to these deliverables, information was drawn from further desk research and the interviews with relevant stakeholders undertaken in this Work Package. From the desk research a series of Agreements stood out and have been included as examples of the implementation of the Good Practices.

Below, these Agreements/Actions are listed and briefly described - as well as a link to the full text of Agreement/more information on the action.

- **Horizon Europe Model Grant Agreement:** A user guide that aims to explain to applicants and beneficiaries the General Model Grant Agreement (General MGA) and the different specific Model Grant Agreements (‘Specific MGAs’) for the Horizon Europe Framework Programme for 2021-2027. Available at https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/agr-contr/unit-mga_he_en.pdf

- **Agreement between FAPESP (São Paulo Research Foundation) and the Swedish Research Council:** Through this Cooperation Agreement, the Parties aim to implement scientific and technological cooperation between researchers from Sweden and from the State of Sao Paulo, Brazil, through the funding of joint research projects. Available at <https://fapesp.br/12490/agreement-between-fapesp-and-the-swedish-research-council-vr>
- **Memorandum of Understanding between AECID (Spanish Agency for International Development Cooperation) and ABC (Brazilian Agency for Cooperation)** Both parties intend to strengthen the international technical cooperation for the development of both countries as well as to promote the implementation of actions to benefit less developed countries.
- **Gender Equity and Diversity Committee (GEDC), from International Union of Crystallography (IUCr).** The GEDC aims to address issues and establish new practices and policies to overcome inequity in the IUCr's processes. More information available at <https://www.iucr.org/iucr/governance/advisory-committees/gedc>
- **Gender Advisory Board, from United Nations' Commission on Science and Technology for Development.** The Gender Advisory Board serves as an advisory body to Commission on Science and Technology for Development on gender and science, technology and innovation. More information available at <https://unctad.org/topic/commission-on-science-and-technology-for-development/gender-advisory-board>
- **Gender@UC EEA Grants, Universidade de Coimbra, Portugal:** Gender-Equal Research or Gender@UC aims to strengthen the integration of the gender perspective into the UC's research processes and content. Available at <https://www.uc.pt/research/gender-uc/sobre/>
- **Action Coalition Technology and Innovation for Gender Equality, Generation Equality.** The Action Coalitions aims to deliver concrete progress on gender equality across generations to come for girls and women in all of their diversity. More information available at <https://forum.generationequality.org/sites/default/files/2021-06/UNW%20-%20GAP%20Report%20-%20EN.pdf>
- **Gender composition and progress on implementation – Report by the secretariat of the Conference of the Parties.** This report is prepared annually by the secretariat to assist Parties in tracking progress towards meeting the goal of gender balance in advancing gender-sensitive climate policy. More information available at: https://unfccc.int/sites/default/files/resource/cp2023_04_adv.pdf
- **Spain's Feminist Foreign Policy – Promoting Gender Equality in Spain's External Action.** This document is an operational guide for the practical implementation of a public policy, delivered through Spain's commitment to multilateralism, its actions in the European Union, their bilateral relations as well as through their development cooperation policy. Available at: https://www.exteriores.gob.es/es/ServiciosAlCiudadano/PublicacionesOficiales/2021_02_POLITICA%20EXTERIOR%20FEMINISTA_ENG.pdf

3 GOOD PRACTICES

From the information collected, 8 Good Practices were described including in each a small description, the objectives, the challenges, some citations from the interviews done and examples of Agreements. Taking into consideration the similarities between the 8 different practices, they were divided in two groups, as follows:

- Preparation and Composition
 - Good Practice 1: Preconditions on the equal participation in the preparation and implementation
 - Good Practice 2: Explicit Inclusion of Gender Equality Clauses
 - Good Practice 3: Gender Advisory Units on the Institutions
 - Good Practice 4: Mentoring Programmes
 - Good Practice 5: Set targets to increase the number of women in STI
- Operationalisation and Monitoring
 - Good Practice 6: Measures to Prevent Gender Biased Research Outcomes
 - Good Practice 7: Specific Incentives to Promote Women's Involvement in the Project's Activities
 - Good Practice 8: Collection of Gender-Disaggregated Data

3.1 Preparation and Composition

Good Practice 1: Preconditions on the equal participation in the preparation and implementation

Description

The inclusion of conditions on the agreements related to gender equality participation in the preparation and implementation of STI agreements aims at fostering gender equity and diversity within the STI landscape.

This action consists of establishing a clause in an agreement that indicates pathways that use positive and negative incentives to foster equality. These incentives can be designed in a gender equality plan and directed to the composition of the teams and preparation of projects. They can be either made by setting affirmative policies aimed at correcting political, economic, ethnic-racial and gender inequalities, as well as quotas for participation of women in sectors where they tend to be less represented. Measures like quotas can be seen as controversial, by imposing the existence of a gender equality plan or direct measures that aim to the implementation team.

International relations between countries can foster the cross-fertilization of good practices. For instance, many countries, especially from Latin America have observed and followed the gender equality measures proposed by foreign partners in their joint project proposals. This has led to more equal gender representation in the agreements' preparation and in the implementation team's composition, as well as establishing measures and practices within their own organisations. In this regard, there are Latin American countries that apply successful affirmative actions in STI-related public policies, indicating valuable learning lessons to their partners in the field, and common areas of interest able to foster interactions based on EDI (Equality, Diversity and Inclusion).

Objectives

Establishing preconditions on more equal participation aims to encourage organizations to guarantee that their teams, working in the preparation and implementation of the agreements, are gender balanced. This practice is expected to help ensure that women, as well as other underrepresented groups, have an equal seat at the decision-making table, including their perspectives and contributions in shaping STI policies and agreements and on their implementation.

Challenges

In some countries there remain STI fields that are still dominated by men. In these cases establishing a precondition on more equal participation can be hard. The feeling can be that there are not enough women in that specific field, and thus such balancing would reduce or hamper inclusion of people that are more suited to the respective role.

This can be the case, in particular, of establishing affirmative policies as quotas for the participation of women - which is a controversial measure. On one hand, it is effective at balancing teams and countering embedded privileges. On the other, it does not guarantee that the best people for the roles are selected, as it may be the case that, by chance, the best people are gender balanced. This can eventually cause the feeling of injustice, and that some people are there by imposition. The inclusion of quotas is a political decision and must be decided case by case.

Another important challenge identified in the research is the existence of different political coalitions that give support to the governments. The political will of including preconditions can depend heavily on the specific coalitions in power.

Interview Citations

“Yes, since we started the Euroclima project, specific preconditions for equal participation have been put in place. The very process of cooperation actions has forced us to seriously incorporate gender mainstreaming at the level of cooperation actions. The experience with the Euroclima Plus programme has changed the perspective of our work here at AECID Costa Rica. We are now working a lot on gender mainstreaming in the projects we implement. Also in the future, we have decided to carry out projects on this basis. The European Union, in terms of development cooperation, takes this issue very seriously and in fact, since we started formulating projects within the framework of Euroclima, the first thing we have had is the support of a gender expert to ensure that the gender perspective is included from the formulation of the project, including the indicators. With this accompaniment, we ensured that from the very beginning of the formulation of the initiatives, the gender issue was there.”

[Spanish Agency for International Development Cooperation, Costa Rica](#)

Explicitly include in all international cooperation or collaboration agreements or conventions, whether they are projects, research, publications, or any other initiative, the requirement for the participation of women, in an equitable manner. If this clause exists, it will be an advance since it will force organizations and people to move forward on this issue.

[RUTE Chile / Universidad de Concepción, Chile](#)

Yes, in the agreement with FECYT Spain for the establishment of a training centre we plan to include gender measures and also in the science diplomacy actions we carried out. Some of these could be the establishment of quotas where possible.

[Uruguayan Agency for International Cooperation, Uruguay](#)

Example Agreements

A range of agreements on an international level already include conditions on the inclusion of women or obligations to the parties to foster gender equality. An example is the following:

VALUES (ARTICLE 14)

Gender mainstreaming

The beneficiaries must take all measures to promote equal opportunities between men and women in the implementation of the action and, where applicable, in line with the gender equality plan. They must aim, to the extent possible, for a gender balance at all levels of personnel assigned to the action, including at supervisory and managerial level.

[Horizon Europe Model Grant Agreement](#)

Good Practice 2: Explicit Inclusion of Gender Equality Clauses

Description

International agreements can include specific clauses related with gender issues. This way, the parties agree to work on gender issues, promoting gender equality. Considering that some international STI agreements are already in place for a long time as a generic juridical umbrella, this can also be implemented through adding a specific clause when agreements are renewed if it is noted that elements concerning gender equality and inclusion can be improved.

This is also related with the advancement of foreign policies focused on development that tackle EDI issues, and specifically, Feminist Foreign Policy (FFP). The FFP aims at including gender in an increasing intersectional perspective in all of a country's foreign policy actions. The FFP concept has been adopted by some countries around the world, such as Sweden, Spain and Mexico. In such cases it was adopted in distinct ways but with a common idea to establish the country as a promoter of gender equality in all of its foreign relations.

It is important to highlight that the feminist approach has evolved to an intersectional analysis. Through an intersectional analysis, this expands to issues such as disrupting the colonial and racist structures of the society. It can be thus understood as a practice of international ethics and an ethical policy.

Objectives

The specific recognition of gender as a part of an agreement can help clarify and ensure that all the involved parties are committed to bring the intersectional gender perspective. In some cases, the intersectional gender perspective is already agreed, but for other cases expressing this specifically in the agreement in ensures that it will not be disregarded.

FFP aims to promote gender equality internationally, while using all the foreign policies and agreements to foster the equality values to other countries and organizations. It also aims at align this internally, with other national bureaucracies and important actors in order to achieve the foreign policy objectives effectively. This is not only an ethical concern. The goal of countries establishing an FFP is also to establish themselves as leaders in the international arena, which they expect will give them more influence and other benefits.

Challenges

Some actors have expressed that in some parts of the world there may not be enough women working on STI, and that the political coalitions in power may have different perspectives on the subject. This can increase the difficulty of the inclusion of such clauses. In these cases, the problem can be solved on its root, with the encouragement of girls to proceed their career in fields where men still are dominant, ensuring them equal opportunities to their male counterparts.

It has been argued that FFP it can be seen mainly as a way of marketing countries as progressive and inclusive, not actually being reflected into real policies and actions - and thus not having a real impact. This is seen as a kind of "genderwashing", focusing on branding the state as something, rather than effectively combatting global male-dominant hierarchies.

Good Practice 3: Gender Advisory Units on the Institutions**Description**

A Gender Advisory or EDI Unit or Committee, in any kind of organization, institution or government body, is a group which is responsible for addressing gender. It provides guidance on the STI agreements signed, checking if they correspond to the organization's values on gender issues and ensuring that gender considerations are included.

These unit works on the preparation and in the implementation of the STI agreements, but also on their monitoring and evaluation, as well as in any initiative or initiative where gender can eventually be included.

They should themselves be gender diverse and balanced, so their advice includes all perspectives – helping to avoid final agreements becoming gender biased. This is generally not a big issue, as committees working on gender are usually gender diverse, by their nature.

Objectives

Gender advisory units essentially aim to advise policy makers when they negotiate in international dialogues (agreements, MoU, calls), ensuring that the policies, agreements and other initiatives include the gender issues and play a role on the path to gender equality in STI. They ensure that gender considerations are an integral part of the decision-making process, policy development and programme implementation.

This committees should advocate for gender-inclusive policies and practices in the STI sector. This will raise awareness about the importance of gender equality, both within the organization and in the wider STI community. This will also contribute for the capacity building of STI professionals, so they have the capacity and the will to include the gender dimension in their work.

The development of a gender advisory unit is a practice that aims at better gathering, compelling and analysing all the existing gender related data, working on the monitoring and evaluation of previously adopted policies.

In general terms, the development of a specific group in the organization created to work on gender and EDI issues aims to play a role on the path to gender balance. Although it is not the solution for all inequality problems, having a group working on this, with the required skills, resources and power to influence the policies can certainly contribute to gender mainstreaming in STI.

Challenges

If the group is not given enough resources and influence then it will not be able to make useful contributions. What is needed for gender balance is the work, guidance and advocacy that the group will provide, rather than the existence of the unit by its own.

Furthermore, the creation and the impact of the unit can also be affected by the lack of coordination within the company/institution. In this case, the unit will not be able to make their opinions heard, and therefore the advice will ne less likely to be integrated and impactful.

Interview Citations

"I have been involved in the discussions under the past European Research Area (ERA) related groups, namely the Standing Working Group Gender in Research and Innovation (SWG GRI) which is a dedicated group on advancing gender equality in the ERA,

assessing the Council and the MS, Associated Countries and the Commission. Hence it follows that a strong majority of women was involved. But this example may not be representative of the phenomena at stake, since it was a dedicated group.”

Fundação para a Ciência e Tecnologia, Portugal

“(…)Having a gender committee that can advise policy makers when they negotiate and agreement would also be a good measure(…)”

Uruguayan Agency for International Cooperation, Uruguay

Example Agreements

It has not been possible to identify a specific clause in agreements that address directly the creation of gender related advisory units. It is however possible to identify organizations where these units were created. These include the following examples:

Gender Equity and Diversity Committee

“The Gender Equity and Diversity Committee (GEDC) aims to address issues and establish new practices and policies to overcome inequity in the IUCr's processes.

The IUCr has joined other scientific unions and organisations affiliated to the International Science Council in signing a Memorandum of Understanding to join the Standing Committee for Gender Equality in Science (SCGES).”

International Union of Crystallography

Gender Advisory Board

“The Gender Advisory Board serves as an advisory body to the Commission on Science and Technology for Development (CSTD) on gender and science, technology and innovation.

Objectives:

- Explore the gender dimensions of STI, by contributing with inputs on gender-related matters in documents of the CSTD.
- Facilitate, as appropriate, sharing of country experiences, highlighting best practices, and suggesting policy recommendations that support the work of the CSTD on gender mainstreaming.
- Provide up-to-date information on opportunities and challenges women and girls in STI are facing, and to explore and suggest ways and means of cooperation to best address them, within the mandate of CSTD.”

United Nations' Commission on Science and Technology for Development

Good Practice 4: Mentoring Programmes

Description

Mentoring programmes are structured initiatives designed to pair experienced professionals (mentors) with early-career or less-experienced individuals (mentees) in the STI sectors. The goal is to provide mentorship, guidance, and support to help mentees overcome barriers and challenges that usually arise when preparing and developing the STI agreements and even, more generally, when working in STI.

Such mentoring programmes can be directed at policy-makers, so they become more conscious about gender issues and are able to include them in future policies and agreements they are involved in. Mentoring programmes can also be directed at women, taking into account the intersection of different layers, working on STI, or even to high-school students or entrepreneurs, so their participation is encouraged and more and more women are involved in STI projects. This will not affect the preparation of the agreements, but in the long-term, will increase the number of women in STI and hence increase the levels of awareness for gender equality in these areas

Mentoring programmes on gender equality can also be included by their own in the bilateral and multilateral agreements, so the parties agree to implement mentoring programmes either together, within their organizations or with external parties.

Objectives

Mentoring programmes aim to transfer knowledge, skills, and expertise from experienced mentors to mentees. This helps mentees to be aware of all the gender issues they should consider in their policy-making job, if that is the case, or on how they can overcome the barriers of being a woman in a male-dominated field such as STI.

Mentoring programmes for policy makers are expected to raise awareness between the present and future policy makers and to give them tools, so they can include gender issues on future policies they design and agreements they prepare. They will be the ones who lead the way for organizations to follow as they are the ones who define the policies and have the power to choose if their organization promotes gender equality or not. Furthermore, if they do, they must be able to promote it through efficient policies, which will have a real impact on the integration of women.

On the other hand, programmes for young women on STI, high-school students or entrepreneurs can be a factor that encourage young women to be able the existing gender barriers and go on with their careers in STI. This will hence play a role on increasing the number of STI, which is the ultimate goal. This will also lead to an increase the inclusion of gender issues on the STI agreements, as there will be more awareness on the topic. Those two components are connected and one helps the other, establishing a cycle on the promotion of gender equality in STI.

Challenges

This is, perhaps, one of the most consensual actions for promoting gender equality. However, the lack of will from the decision makers and the lack of resources can stop the measure from being effective. In some cases, lack of available qualified mentors can also be a challenge.

Interview Citations

“We are aiming to increase the participation of women in STI careers, for which we are developing work models with high school students, with mentoring and links with the environment.”

Universidad de la Frontera, Chile

"There are specific agreements, example Great Britain: British Council promotes master degree studies, women mentoring in science: female researchers of the National System of Researchers with students, also some USA universities go in this direction, Cuba too, FLACSO (Latin America) promotes women with access to these careers."

CONACYT, Mexico

"(...) During the course of my talk, I used specific examples of my gender-based experience in the international conferences and collaborations and discussed in length that how it can be improved and dealt with. Being a public speaker and mentor, I frequently use my opportunities to interact with female students and make them aware about the stereotyping which exists in the society and ways to counter them."

Mentor-of Change, NITI Aayog, Government. of India

Yes, Equals-EU project aims to provide mentorship to support female entrepreneurs.

Aging and Technology Policy Lab at Korea Advanced Institute of Science and Technology (KAIST), South Korea

Yes; more interest and awareness through greater and more diverse levels of participation, mentoring and "multiplier" effect of creating.

European American Chamber of Commerce, United States

Example Agreements

"The Gender@UC EEA Grants project aims to reinforce the integration of the gender perspective in Universidade de Coimbra research processes and content by implementing a set of measures promoting Gender Equality (GE), through the training of researchers, changing the procedures of the R&D Units, actions of removing barriers to participation and promoting GE; and the change in the production and communication of knowledge includes actions of gender analysis with a view to the elimination of stereotypes and gender biases.

It aims to combat vertical / horizontal segregation in the research career of women through mentoring and support for the research career;
(...)"

Gender@UC EEA Grants, Universidade de Coimbra, Portugal

Good Practice 5: Set targets to increase the number of women in STI**Description**

Setting targets to increase the number of women in STI involves defining specific, measurable goals or quotas to ensure that women are adequately represented in STI-related roles, activities and core decision-making positions. These targets can apply to various aspects of STI, including research, leadership, education, and innovation, and they are typically established at organizational, institutional, or governmental levels.

The inclusion of such targets in bilateral and multilateral STI agreements goes beyond the reference to gender equality as a generic goal to be achieved, but also defines tangible and measurable goals that are agreed to be achieved and that can be used as a goal inside the organization that fosters the implementation of gender equality measures.

These targets can be adapted to each context, being designed according to them, and obligating organizations to increase their performance in many different parameters. The choice of this parameter should be tailored to the general objectives of the agreement and can go from the percentage of women in a certain role to a minimum number of gender equality measures to be adopted.

Objectives

The primary objective of setting targets to the increase of number of women in STI is to promote the inclusion of more women in this field. To set a concrete target to be accomplished forces organizations to effectively act. In contrast, just referring to gender equality in a more generic way may keep gender equality behind other priorities.

Having a concrete goal to fulfil will foster organizations to really act, even resulting in eventual penalties if they do not. This is more appealing than just working on gender equality without knowing how and on what parameters the actions should focus.

Setting concrete targets also creates a framework for the establishment and improvement of monitoring of gender equality policies. It creates concrete indicators to monitor, and thus evaluate if the targets are being accomplished, and help provide analysis if not on what measures can be implemented.

Challenges

To define clear and concrete targets for gender equality in STI agreements can be challenging. Firstly, the definition of the targets that consider the diversity of STI fields, regional variations, cultural differences and the availability of qualified women in the sector can be difficult. Also, with the rise of intersectionality as an important issue, the scope of action of the targets often needs to be enlarged, making this task more difficult.

Furthermore, some resistance to the targets can occur, as organizations may not want to commit to concrete and tangible targets, particularly if there are penalties in case of non-fulfilment.

Interview Citations

“We do not have them in the STI agreements, but we do have them in some projects, especially in the Framework Programme. The agreements in the area of education do establish some measures to promote certain lines.”

Uruguayan Agency for International Cooperation, Uruguay

"I am currently not aware of such targets being explicitly mentioned as warning or in a provision but I am pretty sure this is a work in progress and it wouldn't surprise me if in a few years we actually see such mentions or provisions in the agreements."

European Research and International Cooperation Department, France

"[...] This type of institute has precise targets in terms of research conducted on women, and consequently also on the share of women researchers involved in research groups and in those research institutes. However, if you ask me precise indicators and targets, I do not have them."

Paris University, France

"CIHR's Strategic Plan includes as a priority, advancing research excellence in all its diversity with performance metrics. All project proposals submitted to CIHR are required to consider the gender dimension in research and innovation. CIHR is involved in initiatives like the Horizon 2020 Gender Net Plus and Gender STI which have some related targets."

Canadian Institutes of Health Research (CIHR), Canada

"Yes for example the project that I am involved in clearly specified that women researchers should be the highest number representing an organisation"

Council for Scientific and Industrial Research, South Africa

"Yes, in the Erasmus Mundus masters degrees agreements and in the EIT innovation projects there are always specific targets about the women participation."

Universidad Politécnica de Madrid, Spain

Example Agreements

"INVEST IN FEMINIST TECHNOLOGY AND INNOVATION ACTION

By 2026, increase investments towards feminist technology and innovation by 50% to support women's leadership as innovators and better respond to women and girls' most pressing needs."

Action Coalition Technology and Innovation for Gender Equality, Generation Equality

3.2 Operationalisation and Monitoring

Good Practice 6: Measures to Prevent Gender Biased Research Outcomes

Description

Implementing measures to prevent gender-biased research results involves the systematic and deliberate incorporation of strategies and safeguards within the research process to minimize or eliminate gender bias, starting from the composition of teams and their leadership, extending through the various steps of the research activity, until research outputs. This can encompass all phases of research, from designing studies to data collection, analysis, interpretation and reporting. The goal is to produce unbiased and gender-sensitive research that accurately reflects the diverse experiences and contributions of all genders.

For instance, in some cases of healthcare and drugs research tests are dominantly performed in men, so not fully considering the differences that diseases and treatments have in different people. There are thus cases where research have gender biased results, as a gender unbalanced sample was being used.

Although, healthcare is not the only case where gender bias can appear and should be combatted. STI areas where men are still dominant tend to not consider gender issues at their whole extent, and so the results often reflect the gender unbalancing of the team that came to them.

Objectives

This topic aims to be part of STI agreements and dialogues, particularly in those related with areas where it is acknowledged that gender plays an important role, and where the research is dominantly performed by gender unbalanced teams, and where gender mainstreaming could have a different research result.

The main objective of this action is to combat this bias on the research results, promoting scientific integrity and ensuring that the final outcomes will be available and useful for everybody, regardless of their gender.

As the research bias is not a problem only related with gender issues, but also with age, ethnicity or disability, EDI measures can promote intersectionality and prevent research bias in the research-related activities.

Challenges

The main challenge identified is the lack of awareness for its need and the composition of teams dedicated to it. Gender research bias is not something that is commonly identified as a problem.

Many researchers and even policy-makers do not realize they are performing a gender unbalanced research and do not consider its balancing as something worth to care about. While some research teams may be aware of it, they do often not have the dedicated personal to accomplish this task.

Furthermore, all individuals have their own internal bias, as they have opinions, life experiences and different points of view. It is impossible to be 100% neutral in any situation and STI is no exception.

It is important to overcome this by gathering teams which are as balanced and diverse as possible, so the final outcome is as scientifically accurate and neutral as possible.

Interview Citations

To avoid a gender bias in the evaluation process, it is avoided to indicate the gender and name of the evaluated researcher.

[Consejo Nacional de Ciencia y Tecnología \(CONACYT\), Mexico](#)

Yes we make sure that when we do sampling of participants from the rural communities for instance we focus on gender bias and try to prevent this as far as possible

[Monash University, South Africa](#)

"SSHRC's Partnership Grants applicants are expected to embed EDI within the design of the research, as appropriate by using, for example, Gender-based analysis plus (GBA+) and complementary approaches such as anti-racist approaches that consider systemic racism and the intersectionality of different identities in the conceptualization of the research (e.g. age, culture, disability, education, ethnicity, gender expression and gender identity, immigration and newcomer status, Indigenous identity, language, neurodiversity, parental status/responsibility, place of origin, religion, race, sexual orientation, and socio-economic status).(...)

[Social Sciences and Humanities Research Council \(SSHRC\), Canada](#)

CIHR requires that peer reviewers complete a bias in peer review training module. Researchers are required to consider sex and gender in the design and implementation of their research projects.

[Canadian Institutes of Health Research \(CIHR\), Canada](#)

Yes. At the micro level initiatives on Women Entrepreneurship promotion, recruitment of staff for research projects, and orient the research staff to focus on avoid gender biases right from framing tools, collection of data to writing the report and outcomes.

[Bharathidasan University, India](#)

Yes. When the National Science Foundation evaluates proposals, the people who are involved in the review/evaluation are briefed and specifically trained to avoid gender bias and conflicts of interests. There are several tools developed by independent organizations that are used for such training. Also, programme directors are often trained to avoid gender bias.

[National Science Foundation, United States](#)

Example Agreements

Although many organizations are implementing measures to prevent that their research do not have any gender bias, specific references to these implementations were not identified in STI agreements. It is noteworthy that some of these measures can be approached during the implementation steps that follow the agreements, for instance through the calls that stem from the agreements.

Good Practice 7: Specific Incentives to Promote Women's Involvement in the Project's Activities

Description

In addition to fostering women's participation in the preparation and operationalisation of projects and agreements, it is also essential to specifically incentivise them to participate in the activities within the projects.

These incentives can come in different ways, and it is up to each organization's creativity to design incentives that are adequate to their objectives and context. This can be made through co-design, monitoring, workshops and having role models that will inspire other women to participate, which is a more pedagogic way of incentive. On the other hand, material incentives can also be offered specifically to women to participate, or even some more creative approaches such as awards and prizes.

The co-design labs can also allow for the creation of new evaluation metrics that take into account different social roles.

Nevertheless the incentive, or combination of them that are chosen, the important part is that they are designed to attract, retain and empower women to participate actively in the various project-related activities, taking an essential part of its success.

Objectives

The primary objective of such incentives is to encourage more women to participate in project activities by making their involvement more attractive, and contributing to their access to leadership roles. This contributes to gender balancing in a men-dominated area such as STI.

Depending on the incentives' design, they may also aim to foster diversity and inclusion within projects, ensuring that the participation of women, but also of other underrepresented groups, is valued and integrated into all aspects of the project.

These kinds of incentives can be used to support skill development and capacity building among women, helping them acquire the knowledge and experience needed to succeed in project roles. This also empowers women to take on leadership positions, make meaningful contributions, and have a voice in decision-making processes.

Furthermore, these incentives also influence the final results in a positive way, since they encourage the women's perspectives and expertise influence project outcomes, to be considered, leading to more balanced and effective results.

Challenges

To have incentives specially designed for just one gender sometimes brings some ethical and legal problems. On one hand, it is good to specifically promote women's participation in the activities and to help them the additional structural barriers that they have to overcome due to their gender. On the other, such policies can sometimes be regarded as a legal form of discrimination, benefiting individuals of one gender in relation to others.

Sometimes, there are legal barriers that may hamper the implementation of affirmative actions. The organization must find ways to nurture the women's participation, and to decrease the gender barriers, without violating such laws and ethical principles.

Interview Citations

"Yes, when we have had workshops with international partners we look at the diversity of participants from an intersectional perspective to ensure participants selected by

NSERC are diverse. This approach has evidently influenced our partners on some occasions.”

Natural Sciences and Engineering Research Council of Canada (NSERC), Canada

“The same incentives mentioned above have to do with distinctions or prizes that have recently been awarded, for example a prize in which they are working with France to distinguish women who work in science and thus have worked together with Conicet in several distinctions of this type always promoting the participation of women in research projects.”

Ministry of Science, Technology and Innovation, France

“Yes. For example, when I'm speaking about my previous position at IILA we had a programme for scholarships where the age limit was higher for women than for men. Considering the fact that many women have to take family leave when they have kids or in order to take care of their kids.”

International Centre for Genetic Engineering and Biotechnology

“We clearly made the choice to favor research projects aimed towards female populations. It is a political choice to favor such projects.”

Agence Nationale de Recherche sur le Sida et les Hépatites Virales | Maladies Infectieuses Émergentes, France

“Yes, we promote connections of female experts from different areas through workshops and seminars, and informal communications.”

Korea Advanced Institute of Science and Technology, South Korea

“Yes; publicity and spotlight on the individual; sometimes financial honoraria and expense coverage.”

European American Chamber of Commerce, United States

Example Agreements

Even though many organizations work to specifically foster the involvement of women in their projects' activities, how this promotion is made is often left at the organization's consideration, rather being explicitly included in the bilateral and multilateral agreements, mainly in the ones with a larger scope. Thus, although it addressed in many of the interviews, it is not possible to identify the inclusion in specific agreements.

Good Practice 8: Collection of Gender-Disaggregated Data

Description

The collection of gender-disaggregated data involves systematically gathering and analysing information that is categorized by gender, with separate data points for different genders. This is essential for correctly monitoring the gender balancing of any organization, project or activity. Without data it is impossible to know how far gender equity is, and to measure the progress of the policies that were implemented. This analysis provides also a quantitative and objective way of assessing how gender balanced is an event that is being organized.

These data can come from several analysis and measurements, such as the number of women leaders and their role on the projects, champions, panellists, authors and participants that international cooperation projects have attracted. Other examples include the speaking times of women, in comparison to men, as one way of monitoring the gender balance of an event and, indirectly, of the activity in which it is inserted. In more recent years, the use of Artificial Intelligence Tools has been considered.

Objectives

One of the main objectives of having gender-disaggregated data is to provide policy-makers, researchers and organizations with the information needed to make informed decisions that consider the specific needs and experiences of different genders. The data also help organizations to monitor their progress in achieving gender equality goals by identifying disparities and measuring the impact of policies and programmes on different genders. In this sense, the interaction between science and policy is even more tangible since the production of important data related to the scientific activity can feed EDI policies.

The data can also be used to conduct gender-specific research, explore the factors influencing gender disparities, and identify areas where interventions are needed, which can lead to better decision making in the future and to implement policies and programmes that address the challenges faced by different genders.

Challenges

Gender-disaggregated data is not always available, as some organizations and institutions do not routinely collect or publish such data. This is an important barrier to designing efficient policies. Collecting gender-disaggregated data is crucial to overcome this challenge.

Collecting gender disaggregated data, and its analysis, can be a challenging task requiring time, funding and effort. In events and activities it is usually simpler to assess the involvement of women through checking the percentage of women participants. However, this may not provide the whole picture of women's involvement.

Furthermore, data disaggregated only by gender often does not account for the intersectionality of identities, such as race, ethnicity, and socioeconomic status, which can influence experiences. It is important to include these parameters in the collection and analysis. However, this inclusion makes the analysis harder and, if it is too detailed, may even carry some privacy concerns. A balanced quantity of data should be collected.

Interview Citations

"No, but here too there is a discrepancy between what can be decided at a national level and what can be imposed in international agreements. Internationally, many things exist, going from nothing much to very sophisticated plans. Internationally, basic data

could be gathered about the share of women in funded projects. It could be feasible to compare these data with the national data. For instance, do the projects on personalized medicine funded by international calls have a similar gender balance as those funded nationally? I suggested to do so. But as of now we are not able to do it, mainly because of the difficulty to collect data. We are very limited by our information systems, and the retrospective data are not exploitable.

[French National Research Agency, France](#)

Yes, it does. CNPq has a data base which can produce sex-disaggregated data on results achieved through to international cooperation actions (joint call of proposals), but not agreements once they are generic, called basic or umbrella agreements. Some kind of data are: gender, number, percentage, education, occupation, occupation field, type of work (technician, professor, scientist, research level, student) and personal data (date of birth, city, nationality, address etc...)

[National Council for Scientific and Technological Development \(CNPq\), Brazil](#)

Example Agreements

Two case-studies for the collection of gender disaggregated data were presented during the twenty seventh Conference of the Parties. The first, quoted below, analysed speaking times of participants in plenaries and meetings on ACE, gender, technology and finance held during the most recent sessions of the governing bodies under the Convention, the Kyoto Protocol and the Paris Agreement, namely COP 26, CMP 16 and CMA 3, and SB 52–55, disaggregated by gender and age

“A. Speaking times

1. Rationale

29. COP 25, in recognizing that the full, meaningful and equal participation and leadership of women in all aspects of the UNFCCC process is vital for achieving long-term climate goals,¹⁸ requested the secretariat to include additional information in the gender composition report.

30. While the composition of Party delegations is an important indication of gender-based participation in UNFCCC conferences and negotiations, such data only reveal who is in the room. They do not provide a more detailed understanding of active participation. The analysis of speaking times undertaken by the secretariat (see paras. 33–41 below) enhances understanding of gender-based participation in UNFCCC conferences and negotiations.”

[Gender composition and progress on implementation – Report by the secretariat of the Conference of the Parties](#)

4 CONCLUSION

This *Good practice brief of gender in bilateral and multilateral STI agreements* underscores the vital importance of promoting gender equality within the framework of these agreements. As our global society continues to grapple with the challenges of the 21st century, it is evident that a comprehensive and equitable approach to STI collaboration is essential for addressing the complex issues we face.

Gender equality is not only a human right and ethic goal, but it also may be a catalyst for social and economic progress. It is incumbent upon us, as a society, and in particular as STI stakeholders to ensure that gender is not just an afterthought but an integral component of our STI agreements.

The practices outlined in this brief demonstrate actions through which gender inclusion can be achievable. Incorporating gender perspectives and ensuring the active participation of women in STI initiatives enhances the effectiveness and impact of international collaborations. This not only fosters a more just and inclusive world but also strengthens the quality and relevance of STI outputs.

The brief has highlighted various successful approaches that have yielded positive outcomes, from the preparation and composition of the agreements to their operationalisation and monitoring. The practices that were considered as the best examples of policies to be implemented were the following:

Good Practices on the Preparation and Composition of STI agreements:

- Preconditions on the equal participation in the preparation and implementation:
- Explicit Inclusion of Gender Equality Clauses
- Gender Advisory Units on the Institutions
- Mentoring Programmes
- Set targets to increase the number of women in STI

Good Practices on the Operationalisation and Monitoring of STI agreements:

- Measures to Prevent Gender Biased Research Outcomes
- Specific Incentives to Promote Women's Involvement in the Project's Activities
- Collection of Gender-Disaggregated Data

This is not intended as an extensive list of all the good practices that are being successfully implemented. Furthermore, there are no magic solutions to achieve gender equality overnight. The proposed solutions should be tailored to each context and reality, using these good practices as good examples.

Citations:

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