

Gender STI

Benchmarking report on gender equality in science, technology and innovation (STI) dialogues

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LIST OF ABBREVIATIONS

AMLO	President of Mexico Andrés Manuel López Obrador
AU	African Union
BRICS	Brazil-Russia-India-China-South Africa
CEDAW	Committee on the Elimination of Discrimination against Women
CINVESTAV	El Centro de Investigación y de Estudios Avanzados del IPN
CSO	Civil society organisation
EIGE	European Institute for Gender Equality
ERAP	Emergency Response Action Plan
FFP	Feminist Foreign Policy
FINGO	Finnish Development NGOs Fingo
G7	Western-centred Group of 7
GBV	Gender-based violence
GBVF	Gender Based Violence Fund
ILO	International Labour Organisation
MFA	Ministry of Foreign Affairs
MO	Member Organisation
NSP-GBVF	National Strategic Plan on GBV and Femicide
OECD	The Organisation for Economic Co-operation and Development
R&I	Research and Innovation
SADC	Southern African Development Community
SDGs	Sustainable Development Goals
STEM	Science, Technology, Engineering, and Mathematics
STI	Science, Technology, and Innovation
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNIDO	United Nations Industrial Development Organization
UNSCR	United Nations Security Council
WPS	Women, Peace and Security

EXECUTIVE SUMMARY

This deliverable focuses on the integration of gender in international science, technology, and innovation (STI) collaboration and draws lessons from international gender equality and feminist policy principles. It acknowledges that while international STI collaboration is becoming increasingly important, yet these fields are still male-dominated and resistant to women's meaningful participation. The study utilises the gendered organisations theory to examine the organisational processes involved in integrating gender equality and feminist (foreign) policy principles in institutions working with international STI related issues. Feminist policy principles enable examining gender dimension beyond binary definition and considers e.g., class, age, race, ethnicity and culture as factors constituting barriers for meaningful participation. The deliverable aims to understand the drivers and barriers for gender mainstreaming in international STI collaboration.

The analysis is structured around the microfoundations of organisations, which encompass processes, tools, structures, and resources that are operationalized for gender mainstreaming. The study examines four different institutions from Finland, Spain, South Africa, and Mexico, representing both the Global North and the Global South.

The findings suggest that countries advocating feminist approaches do not always translate into gender-prone STI policies, as feminist approaches may be used superficially without true bottom-up integration. Institution-level action plans tend to focus on either technology and innovation or gender and women, rather than combining the two. The study highlights the importance of active engagement and leadership, personnel education on gender issues, self-reflection, and tools for gender sensitivity in STI projects as key driving forces in adopting feminist agendas in international institutions. The process of gendering institutions involves internal deliberation, reflection, education, and training on gender issues. However, gender mainstreaming requires translating gender dimensions from strategies to project designs and local-level activities. Achieving gender equality within organisations working on empowering women is a slow and sometimes turbulent process due to the personal engagement and emotional toll it can take on individuals and institutions.

The paper proposes the establishment of open, inclusive, and ongoing dialogue in the international STI community, involving grassroots actors and considering local contexts. It emphasises the need for clear and accessible language in STI gendering efforts to ensure understanding and benefit in the intended contexts. Self-reflection, awareness raising, and training on gender issues are essential for improving gender equality and mainstreaming in institutions. Breaking governmental silos and establishing cross-sectoral working groups are recommended to integrate feminist principles into sectoral policies and strategies.

In conclusion, the study suggests that policies should address institutional levels and encourage gender mainstreaming practices. This includes reflecting on organisational strategies for gender equality, providing education on gender issues to personnel, offering tools and assistance for human-centred approaches and gender impact evaluation, and fostering collaboration with gender equality pioneers to facilitate institutional learning.

Policy proposals

These policy proposals aim to promote gender equality, inclusivity, and feminist principles in international STI collaboration to enable a more equitable and diverse STI landscape that harnesses the full potential of all individuals, regardless of gender.

1. **Integration of Feminist Principles in STI Policies:**

- Using gender mainstreaming tools to integrate feminist principles in science, technology, and innovation (STI) policies.
- Move beyond focusing solely on improving the representation of women in scientific careers and decision-making positions. There should be a greater emphasis on integrating the gender dimension in research and innovation (R&I) content. This can be achieved through training programs that educate researchers on addressing gender equality and inclusiveness in their work. By broadening the scope of gender mainstreaming, STI policies can address the systemic barriers faced by women and promote gender-responsive innovation.
- Aligning STI policies with foreign policy objectives, breaking down silos between different sectors, and establishing cross-sectoral working groups to address gender mainstreaming in STI.

2. **Promoting Gender Mainstreaming in Institutions:**

- Institutions operating in the field of STI should adopt gender mainstreaming practices. This includes reflecting gender equality and equity in their organisational strategies, providing education and training on gender issues for all personnel, and offering tools and support for implementing human-centred approaches and gender impact evaluations.
- For the policies to be successful, high-level engagement, ownership and sufficient resource allocation for gender mainstreaming efforts is crucial.
- Collaboration with organisations that have expertise in gender equality can facilitate institutional learning and best practices.

3. **Contextualizing Gender Mainstreaming Approaches:**

- When implementing gender mainstreaming initiatives in international STI collaboration, it is crucial to contextualise and adapt the language and terminology to local socio-economic, political, and cultural contexts. This ensures that gendering institutions resonate with the local communities and are effective in addressing gender issues.
- Stakeholder engagement at all levels, including grassroots actors, should be prioritised to ensure inclusivity and relevance in the development and implementation of gender mainstreaming initiatives.

4. **Supporting Self-Reflection and Awareness:**

- Achieving gender equality and mainstreaming in institutions requires self-reflection and awareness of one's own positionality.
- Organisations should provide training programs and resources to facilitate awareness raising, foster critical reflection on gender issues, and develop skills for participatory methods in the daily work of STI institutions.
- By promoting a culture of self-reflection and continuous learning, institutions can navigate the challenges associated with gender equality and create inclusive environments for all individuals.

1. INTRODUCTION

This deliverable focuses on the integration of gender in international science, technology, and innovation (STI) collaboration and draws lessons from international gender equality and feminist policy principles. It acknowledges that while international STI collaboration is becoming increasingly important, yet these fields are still male-dominated and resistant to women's meaningful participation is still prevalent. The paper utilizes the gendered organizations theory to examine the organizational processes involved in integrating gender equality and feminist (foreign) policy principles institutions working with international STI related issues. Feminist policy principles enable examining gender dimension beyond binary definition and considers e.g., class, age, race, ethnicity and culture as factors constituting barriers for meaningful participation. The deliverable aims to understand the drivers and barriers for gender mainstreaming in international STI collaboration.

International STI is increasingly characterized by its international nature (Griset, 2020). The growing internationalization of STI is argued to be due to the growing importance of the knowledge economy, as well as the role placed for STI in finding solutions to wicked problems, such as climate change and sustainability (Leijten, 2017; Schot and Steinmuller, 2018; Blanco et al., 2022). With this, the international and national STI related policies and dialogues can have a reciprocal influence on international cooperation, but also domestic STI fields, for example, through international research funding and collaboration programmes.

Usually, international STI collaboration refers to state level bi- and multilateral dialogues (Gursch et al., 2023; Sokolov et al., 2019). Boekholt, et al. (2010) distinguish a narrow and broad understanding of international STI collaboration. In the narrow sense STI collaboration refers to STI diplomacy, which focuses on narrowly (usually) state led international research collaboration and the connections between international relations, foreign policy and the studies of STI (Bonilla and Serafim, 2021). The broader definition focuses on how *"other non-science policy objectives interact with the 'intrinsic' science-oriented objectives and STI cooperation becomes a means to reach other policy ends"* (European Commission, Directorate-General for Research and Innovation, 2009: 8). In this paper, we define international STI collaboration in the broad sense as international state and non-state actors' collaboration relating to STI, encompassing official state led science diplomacy, trade and science policy, university and business level collaboration, state and non-state led development cooperation, and finally increasingly NGO level collaboration. Thematic areas can focus from scientific collaboration to technology and innovation development, technology transfer to trade and more.

The increasing importance of international collaboration in STI is also highlighted in recent publications. Past papers cover a wide range of topics from the conceptualisation of innovation diplomacy (Griset, 2020), to coordination of foreign science policy between EU Commission and Member States (Rüffin, 2020), use of STI policy in leveraging other diplomatic aims, such as migration policy (Leese, 2018), peace and conflict, (Griset, 2020), and foreign policy objectives (Buyuktanir Karacan, 2021). Scholars have also discussed STI collaboration through the role of technology diplomacy at the age of digitalisation (Feijóo et al., 2020; Masters, 2021). Yet, despite this increasing interest in

STI diplomacy, only a few past studies have focused on societal dimensions, and more precisely the gender dimensions in STI diplomacy. Few that have done so discuss gender representation in world science Expo (Cohenmiller et al., 2020), possibilities for gender mainstreaming in multi- and bilateral agreements (Gursch et al., 2023) and gender differences in international collaboration of scientists and engineers (Frehill and Zippel, 2011).

Yet, at the same time, STI related fields nationally and internationally continue to be masculinised spaces, where overall resistance to women's meaningful participation remains standard practice. This not only demarcates women from the fields, but also reflects the broader ability of the STI to respond to the expectations, such as finding solutions to wicked challenges. While there have been various attempts to improve the societal responsiveness of STI in the past, approaches have failed not only to integrate women, gender-diverse people and minorities to the fields, but also integrate the gender perspective into R&I content (Tannenbaum et al., 2019), which is crucial for the societal responsiveness of STI.

While the policy areas of STI and international affairs differ, important overlaps exist which makes understanding the dynamics of gender mainstreaming in international affairs feasible. International affairs continue to be masculinised spaces (Runyan and Peterson, 2014), which has impacted the ways in which international affairs influence different segments of the population, but it has also demarcated the group who makes decisions in the international sphere. This characteristic fundamentally influences what kind of questions are being raised and addressed, and who primarily benefits from international agreements and its follow-up outputs, including funding packages. More often than not, the absence of diverse decision makers and lack of inclusive agenda setting, international relations have not regarded and at worst, worsened the situation of marginalized communities. This has resulted in yielding inequalities, rising conflicts and inabilities to solve great problems of our times. Similar trends can be found in international STI dialogues.

Following the gendered organisations theory, we study the organisational processes of integrating gender mainstreaming principles in foreign policy and development institutions to understand drivers and barriers for gender mainstreaming in international STI collaboration. According to gendered organisations theory, institutions operate "as sites that (re)produce gender dynamics and the gender order" (Rodriguez and Guenther, 2022). This means that gender norms and stereotypes influence organisational cultures, practices, and regulations (Acker, 1990), which all have an impact on how the institutions take into consideration gender questions in their substance, human resources as well as general operations. Gender mainstreaming in this sense is a comprehensive strategy that is seen to have impact on not only gender equality in quantitative terms, but also qualitatively. In the STI fields, gender mainstreaming is important as gender inequalities and hegemonic masculine cultures are seen to contribute to the gender insensitivity of research and innovation (R&I) content (Bhatia et al., 2022; Wullum Nielsen and Börjeson, 2019).

This study takes on the task of exploring gender mainstreaming in the international sphere through feminist foreign policy (FFP) for three main reasons. First, FFP has recently emerged as an analytical framework to enhance understanding how gender is on the one hand being considered in international affairs (high-level political events and

activities, including dialogues), and on the other hand how certain foreign policy practices impact gender policies domestically. FFP can be considered as a methodology adopted for enhancing gender mainstreaming in international affairs institutions. This means a systematic practice to ensure that *“a gender perspective [is integrated] in all policies and programmes so that, before decisions are taken, an analysis is made of the effects on women and men, respectively”* (United Nations, 1995: 116). So far, a handful of countries have labelled their foreign policy approach as feminist. These countries include Canada (2017), France (2019), Mexico (2020), Spain (2021), Luxembourg (2021), Germany (2021) and Chile (2022) (UN Women, 2022).

Secondly, as mentioned, the role of STI is increasing its importance globally. International STI domains range from basic scientific research, development and testing of innovations, investments, start-ups, and commercialisation. With this, the international dimensions of STI are myriad, and take place at different ministries and domains of international relations, not only under foreign policy per se. A challenge in understanding international STI is this diversity. Complexity can lead to policy incoherences, but also in difficulties in comprehending how and where to tackle persisting inequalities. The FFP framework read through the gendered organisations theory helps to understand dynamics and points of intervention.

Finally, there is an increasing understanding of the importance of gender in research settings and content, for example at the level of European Commission (EC, 2020), relatively little is known about how to take into consideration and enhance gender dimension in and through international STI collaboration. At the same time, FFP operates as a tool to enhance gender mainstreaming and policy coherence in the international sphere. However, unlike international affairs, no general framework for analysing gender in STI or in international STI collaboration exists. Therefore, analysing gender in international collaboration through the cross-section between FFP and gender in STI could further enhance understanding on the integration of gender dimension in international STI collaboration. Understanding FFP from the point of view of STI might, in turn, help to develop a framework for the future studies.

To explore these connections, we ask “How can feminist (foreign) policy principles guide integration of gender dimension into international STI collaboration?”

To understand this, we explore a set of foreign policy and development institutions that have either implemented feminist policy principles or are forerunners in integrating gender into STI related projects. From these cases, we draw learnings on how to enhance integration of gender dimension in international STI cooperation.

1.1 Gendered organisations in STI

1.1.1 Gendered organisations theory

Social norms and societal hierarchies are central dimensions of gender inequalities (Acker, 1990; West & Zimmerman, 1987). Gender is a social construct which affects gender identities as well as the gendered roles in society. It is a powerful set of social norms tool that directs and disciplines the behaviour, expectations and valuations of

men, women, and other genders in society. Gender identity and gender relations are maintained and reproduced through societal interactions, such as education and upbringing, media, workplaces, and cultures.

Gendered organisations theory focuses on organisations and argue that they operate “as sites that (re)produce gender dynamics and the gender order” (Rodriguez and Guenther, 2022). This means that gender norms and stereotypes influence organisational cultures, processes, and practices within the organisation, but also societally through gendered hierarchies of labour (ibid.; Acker, 1990; Acker and Van Houten, 1974). In the STI fields, gender inequalities and hegemonic masculine cultures (Connell, 1995) are argued to contribute to the exclusion of women in the STI labour force and decision-making positions (Hansson et al., 2010). As a result of such exclusive organisational cultures, research and innovations in some fields are gender blind and maintain exclusionary cultures (Lindberg and Schiffbaenker, 2013; Balachandra et al., 2019). As a result, the gender insensitivity of R&I content can further increase marginalisation of communities and genders, for example from economic spheres (Buolamwini and Gebru, 2019; Bhatia et al., 2022; Wullum Nielsen and Börjeson, 2019).

The introduction of gender lens into organisational studies enabled seeing how gender norms influence organisational hierarchies of labour, careers, and other societal outcomes. Yet, its biggest impact on organisational studies has been the integration of gender lens into organisational settings. As argued by Bishu et al. (2019), the ability to change gender relations requires the ability to see gender. Organisations may be gendered in different ways (Acker, 2006), and it is important to be careful not to essentialize organisations masculinity. Gendered organisations theory is first and foremost an analytical tool that enables us to explore how organisations are gendered (Bates, 2022; Hansson et al., 2010).

Understanding the gendered nature of organisations in the context of international STI is relevant not only for the internal gender relations, but also for understanding the social responsiveness and social responsibility of STI institutions. If STI organisations are not diverse and inclusive, it is quite unlikely that they will consider societal impacts from multiple perspectives (Schiebinger, 2008). Concerning this claim, sociologist Joan Acker (1990) has studied gendered organisations from the point of view of corporate social responsibility at the level of the economic system. Acker argues that one of the root causes for persisting gender inequalities lie in the logics of the organisation. Her argument lies in two premises. First, the historical division of labour according to gender roles has influenced many organisations to be gendered. Secondly, driven by profit interest that mostly concern the male-positionality, organisations disregard social responsibility and impacts if it does not create value-additions to the organisation. Such gendered organisational structures have ethical implications that influence gender relations in the whole society (Acker, 2013). With this Acker argues that while there are claims for corporate social responsibility and social justice, little is known how to enhance that in practice in a system that is driven by economic profits only. The same applies to gendered STI institutions - to understand how they impact the society we must understand whose problems are institutions trying to solve. And what is the underlying organisational logic of science, technology and innovations? It is also essential to understand whose needs, view of development they address.

1.1.2 Gendered organisations in STI

STI organisations have historically been built around the male norm. This can result from the reciprocal co-construction of STI and masculinity, meaning that science, technology and innovations have usually been considered as masculine, or belonging to the male norm (Carter and Kirkup 1990; Cockburn and Omrod, 1993). Consequently, many STI institutions and organisations remain gendered. The gendered nature becomes evident, for example, in the gender segregation in science, technology, engineering, and mathematics (STEM) related education (Mergaert and Lombardo, 2014; Pettersson, 2007), STEM related entrepreneurship (Poggesi et al., 2019; Karataş-Özkan and Chell, 2015), gendered recruitment patterns of STI fields (Cockburn and Omrod, 1993) and exclusionary organisational cultures and practices (Fältholm, Abrahamsson, and Källhammer, 2010; Balachandra, et al. 2019; Eriksson, Henttonen and Meriläinen, 2008). All of this result not only of the lack of women in STI careers and the lack of diversity in innovation (Hofstra et al., 2020; Søråa et al., 2020; Kozłowski, 2022), but also the lack of gender dimension in R&I content (Schiebinger, 2014).

The gendered nature of STI is a question of epistemological nature, too. Feminist and post-positivist scholars argue that researcher's own positionality often has an impact on research content via for example, setting research questions (Simandan, 2019). While years of academic studies and interventions have been conducted on gendering STI, little change is seen. One of the challenges emerge indeed from the strong positivist epistemological groundings of STI. The idea of objectivity and positivist epistemology contributes to "gender blindness" in STI fields, as science is held universal and "objective". (Hansson et al. 2010). Hence, any "de-gendering" of STI has been difficult.

The issue then in gendering STI institutions is that rather than integrating more female innovators and scientists into the fields of STI we must enhance reflective capabilities in the fields. As argued by Pettersson (2007), STI is usually constructed around connotations and context that represent masculinity. It means fundamental rethinking of innovation starting from decomposing our understanding of innovations, which are closely linked with traditional connotations of the economy. This approach implies rethinking "which actors are seen as assets and what sectors of the economy are seen as "strong" or useful in innovation policies and innovation networks" and how they are also gendered (Lindberg and Schiffbaenker, 2013).

Recently, discussions on the importance of recognising the gendered nature of STI have increased. One of the reasons is that research and technology development require an increasingly wide range of knowledge inputs because of complexifying systems in the fields (Wullum Nielsen and Börjeson, 2019; Leijten, 2017). Different fields of science have developed much more nuanced, and the need for social and societal understanding has increased (Leijten, 2017: 6). Here, gender knowledge is of increasing importance, for example, in impact analysis and assessment, societal analysis and research design(s). Therefore, the question of integrating gender perspective into STI content becomes more important. At the same time, the increasing internationalisation of science poses challenges for how to tackle gender inequalities in these domains as internationalisation tends to increase gender segregation (Runyan and Peterson, 2014). Yet, as mentioned in the previous sections, integrating gender perspective into R&I content may be hampered due to the gendered nature of international as well as STI organisations. Next, we will

discuss “gender mainstreaming” in organisations as a way to enhance integrating gender perspective into STI.

1.2 Gender mainstreaming to tackle gender in institutions

In gendered organisations literature, “gendering” is seen to happen through five interlinked processes (Figure 1 **Error! Reference source not found.**) - 1) gendering practices and structures, 2) gendering cultures, 3) gendering interactions, 4) constructing gendered identities, 5) organisational logic which works through the preceding four sets. (Acker, 1990; Bates, 2022).

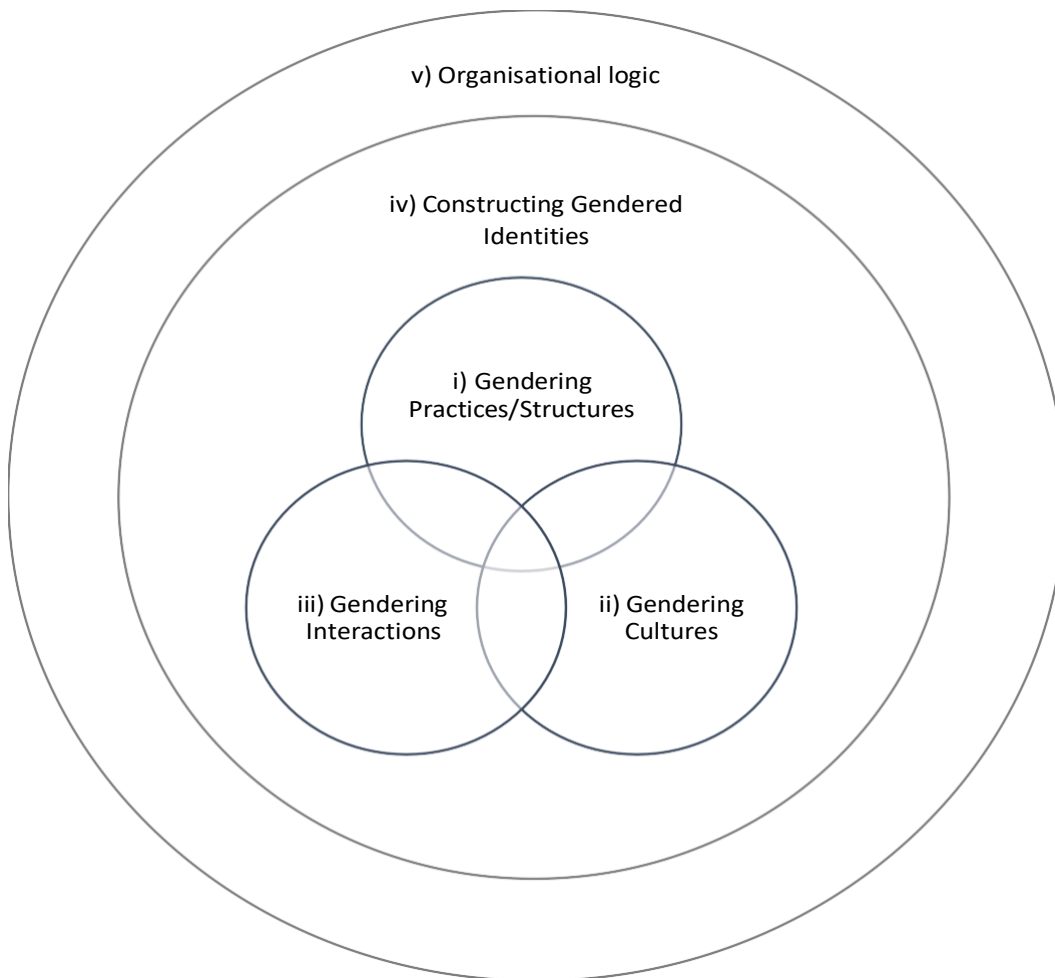


Figure 1: Gendering processes in organisations. Source: Adopted from Bates (2022) and Acker (1990)

The first one, gendering practices, means the ways in which gender is constructed in divisions of labour, of allowed behaviour and physical spaces and power. Second, gendering cultures explains the construction gender through symbols and images that explain, express, and reinforce gendered divisions. Third, gendering interactions means looking at interactions between different people and the ways in which for example gender roles and norms are reinforced or decomposed in such interactions. Fourth,

constructing gendered identities refers to the ways in which gender is done or practiced, for example, through the choice of appropriate work, language use and clothing. Finally, the gendering of organisational logic concerns the logic of gendered assumptions and practices which underlie the organisation created in the organising processes. (Bates, 2022 p. 1044). Organisations may be gendered in different ways and are not essentially masculine or not. This analytical tool tries to understand if organisations are gendered, and how.

Gender mainstreaming is the approach in which the actions to make an organisation more gender equal and inclusive are transversally embedded in all the organization's policies and practices are embraced by. According to Lindberg and Schiffbaenker (2013) gender mainstreaming can be implemented in two ways. First, through integrationism that "promotes gender mainstreaming as "a way of more effectively achieving existing policy goals". Or second, through agenda setting, which means "*the transformation and reorientation of existing policy paradigms, changing decision-making processes, prioritizing gender equality objectives, and rethinking policy ends*" (p. 783). The latter focuses on the integration of gender perspective into the preparation, design, implementation, monitoring and evaluation of policies, regulatory measures, and spending programmes (EIGE, 2023) and aims at including the voice of marginalised, rather than focusing only on quantitative equality and gender neutrality (Lindberg and Schiffbaenker 2013, 784). Yet, both lines of streaming are needed.

European Institute for Gender Equality has created a framework to approach gender mainstreaming as a political commitment reflected in the legal framework of the organisation (see Figure 2). It includes dimensions of equal representation of women and men, and integration of gender perspective in the content of policies, also meaning programmes, actions, and tasks.

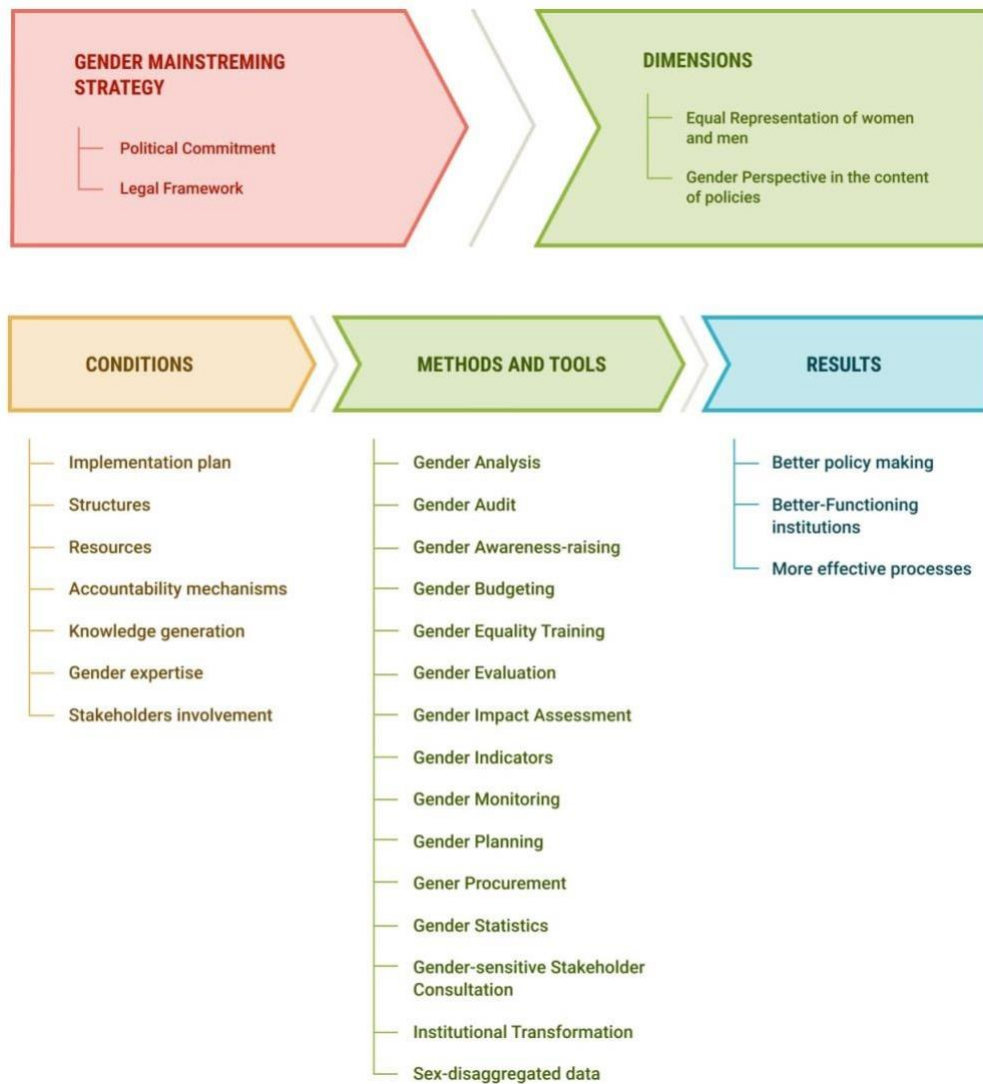


Figure 2: Gender mainstreaming introduced by EIGE. Source: EIGE (2023)

To conclude, gender mainstreaming is a strong means to increase equality and inclusivity, and it can be seen to be done via adopting a strategy or legal framework, conditions, methods, and tools to help in these processes. At a more detailed level this means new capabilities, which consist of multiple ‘microfoundations’, such as processes, tools, structures, and resources (Teece 2007; Felin et al. 2012).

In international STI collaborations two important domains interplay. First, the gendered structures of international participation and second, the aforementioned gendered nature of STI in general. Because of strong gendering structures, including gender perspective into international STI domains is a difficult task. To unlock some of these structures, we will explore feminist foreign policy as a gender mainstreaming effort at the international STI collaboration level.

1.3 Gendered institutions in international domain and the rise of feminism in foreign policy

As said above, the deliverable draws from our interest in understanding how feminist policy principles— in particular feminist foreign policies — can or not contribute to a greater integration of the gender dimension in international STI collaboration. Feminist Foreign Policy (FFP) presents itself as an interesting approach for understanding processes of making masculine organisations more egalitarian. In fact, international relations and diplomacy have similar tendencies as STI institutions in terms of being affiliated with masculinity, and with gender imbalances in the workforce as well as lack of gender perspective in decision making and gender assessment of policies.

1.3.1 Feminist Foreign Policy

While interest in FFP has increased in the international sphere recently, no single definition for it exists. In fact, it is argued that its' adoptees have interpreted the concept in different and even competing ways (Zhukova et al., 2022; Delgado, 2020; Thomson, 2022). Rather than a set of specific practices, Thomson (2022, p. 174-175) argues that FFP is more a "broader signal" of the state's commitments to international liberal norms and institutions, with "feminism and gender equality more clearly anchored" in all foreign policy actions. In some ways, as Thomson continues, FFP is not a new or original policy, but "rather a repackaged commitment to a liberal policy agenda, with feminism and gender equality more clearly anchored as its central defining mission" (ibid.).

Indeed, the emergence of FFP is by no means an isolated phenomenon, but rather a continuum of growing international attention in feminism and gender-equality. The roots of FFP lie in the Convention for the Elimination of all Discrimination Against Women (CEDAW) of 1979, the Beijing World Conference on Women in 1995, the UN Sustainable Development Goals (SDGs), and the UN Security Council Resolution (UNSCR) 1325 on Women, Peace, and Security adopted in 2000, the formation of UN Women in 2010, and the initiation of the Council of Europe Istanbul Convention in 2011 (Aggestam, 2020; Thomson, 2022). A gendered lens and the prioritisation of gender equality has become increasingly common in foreign policy agendas, and several countries (among those Finland and South Africa) and regional organisations (such as the EU) emphasise the need to promote the rights of girls and women, the participation of women in decision-making and peace negotiations, and shifting the focus of foreign policy collaboration to inherently address gender issues, even if they do not label their foreign policy as feminist.

However, FFP goes further than just working towards gender equality, as the adjective feminist underlines the intention to not just be reformist within existing structures but structurally disruptive and transformative (Thompson et al., 2021), in an intersectional perspective. In other words, the feminism of FFP does not stop at promoting the participation of women and girls, but recognises the need to disrupt colonial, racist, and male-dominated structures of the foreign policy domain (Thomson, 2022). As such, as a practice of international ethics and an ethical policy, FFP seeks to improve decision-making and bring about change through intersectional analysis, self-reflection regarding the hierarchical global systems in foreign policy, accountability, substantive

representation and participation, and local ownership (Aggestam et al., 2019; Cheung et al., 2021; Nylund et al., 2022).

In practice FFP has been adopted in various ways, typically including a feminist lens being applied to different foreign policy fields. The most comprehensive feminist foreign policy framework was put forth by Sweden, “the mother of Feminist Foreign Policy”, in 2014-2022 (Thompson et al., 2021, p. 2-3). The scope of the Swedish 3/4R approach (Rights, Representation, Resources, and Reality) pierced virtually all foreign policy actions from aid to trade, defence, development, and diplomacy, whereas the Canadian Feminist International Assistance Policy and the French *Diplomatie Féministe* mostly tackle international development policy (Hicks, 2021). In effect the Swedish FFP entailed advocating for the rights and the participation of women domestically and globally in its foreign affairs institutions and in international forums, allocating majority of the development aid directly to benefit women, prioritising women’s economic empowerment in trade agreements and initiatives, and pursuing gender-sensitive approaches and responses in all foreign policy areas from tackling climate change to migration policies (Swedish Ministry of Foreign Affairs, 2019). Like Sweden, Spain and Mexico have also described their FFP to cross-cuttingly emphasise gender equality in all their foreign policy actions, but place more emphasis on intersectional feminism (Delgado, 2020; Hicks, 2021; Spanish Ministry of Foreign Affairs, 2021). Several states have also developed monitoring and evaluation mechanisms for their feminist policies: for example, Canada developed key performance indicators on each of their FIAP area, collects data annually and makes it publicly available (Thompson et al., 2021). For Mexico, FFP also extends to their domestic affairs, through emphasis on diverse representation of different genders in government positions and tackling gender-based violence (GBV) in the Ministry for Foreign Affairs (MFA), for example (Hicks, 2021; Delgado, 2020; Thompson et al., 2021).

Yet, while FFP can hold transformative potential, it is important to highlight that it has been criticized for being merely a narrative tool for states. The word feminism has gained prominence in a way that declaring one’s foreign policy as “feminist” signals a certain superiority, and that its adoptees are fundamentally “good states” (Thomson 2022, p. 176). Therefore, declaring one’s foreign policy as feminist is an effective tool in managing state image in the neoliberal international arenas (Aggestam et al., 2022), as well as a means for “middle-powers” to make themselves more relevant on an international stage (Thomson 2022, p. 181) and exercise their soft power abroad (Zhukova et al., 2022). For example, as undersecretary Martha Delgado Peralta (2020, p. 13) put it, by adopting FFP Mexico aims to “send out a message as to how it plans on addressing some of the greatest challenges facing humanity”, while giving Mexico “a leading role on the international arena”. Furthermore, FFP has in some ways become a strategic story through which states make sense of themselves and narrate their identity (Zhukova et al., 2022). As a means of “branding” the state image, the adoption of FFP also entails a risk of “genderwashing” policies (Nylund et al., 2022, p. 3) and functioning counteractively, rather actually addressing global hierarchies and colonial power structures (Thomson, 2022). Like any policies, FFP is also subject to shifting political priorities and governments, as we have seen in the Swedish case. This is important to keep in mind when exploring FFP’s impact on gender in the organisations, as it happens that commitments to equality can fall short in STI institutions, too.

Despite criticism, FFP offers a burgeoning and promising political framework for gender mainstreaming in a wide range of foreign policy areas, as the commitments to

intersectional analysis and avoiding othering are incorporated in its feminist agenda (Nylund et al., 2022). The most recent interpretations of FFP from Spain and Mexico (the first country to adopt FFP in the Global South) also counter much of the criticism FFP has faced, by building on the aspects of transformation, ownership, commitment, inclusive participation, intersectionality, and diversity (Ministry of External Actions, EU and Cooperation of Spain, 2021; Thompson et al., 2021).

1.4 International STI cooperation

While the international STI collaboration is a wide topic, the discussion is somewhat most developed in the frameworks of STI diplomacy (Lejiten, 2017; Griset, 2020). The literature recognises that STI is becoming more international by nature. Similar notions are suggested in the recently published literature on STI diplomacy, which discusses the international settings in which the role of STI is increasing.

While discussion on international STI has been on the rise, one of the difficulties of this discussion is the myriad definitions for the phenomena. Firstly, science, technology and innovation in themselves already represent a huge array of entities, domains, actors, institutions and focus areas. As such, international STI collaboration also takes place in various domains of international cooperation. For example, only in the field of science diplomacy we can identify various domains that “revolve around observing and promoting science, technology, innovation and higher education policies abroad, marketing a nation’s related domestic actors and their activities, and establishing bi- and multilateral funding projects and institutional support structures (legal frameworks, MoUs, joint programming secretariats etc.)” (Flink, 2020). This already encompasses a wide variety of different actors and institutions, ranging from research performing organisations to third sector actors, governments, and trade promotion institutes. From this list, a less investigated group of STI actors is non-governmental organisations (NGOs) whose role in the foreign policy domain is however substantial.

Secondly, science, technology, and innovation, while interlinked, are all different entities and defined by different processes, aims and as such, scopes of international collaboration. Leijten (2017), for example, focuses on science diplomacy in foreign affairs and science policy, and looks at international organisations and institutions that deal with questions related to science. Griset (2020) on the other hand focuses on innovation diplomacy, which focuses “at crossroads of science, technology, economy and culture”. Miremadi (2016) discusses science and technology diplomacy and adopts an innovation systems’ perspective that emphasise international dimensions of different functions in the innovation system.

The various framings and uses of STI diplomacy have been highlighted in the past studies. For example, studies have focused on the use of STI policy in leveraging other foreign and diplomatic aims, such as migration policy (Leese, 2018), as tools for peace and conflict (Griset, 2020), as solutions for grand challenges (Flink, 2020), and other foreign policy objectives. Scholars have also discussed the importance of technology diplomacy at the age of digitalisation (e.g. Feijóo, et al., 2020; Masters, 2021). These framings highlight that the idea and role of STI in both diplomatic relations as well as in international relations is becoming increasingly important (Lejiten, 2017; Griset, 2020), and that STI issues are increasingly complex and deal with a variety of societal issues (Feijóo, et al., 2020; Masters, 2021). Given this, it is important to note the ways in which

international STI collaborations take into account different societal dimensions. As argued by Masters (2011), “technology and its development are not value neutral” (p.362). Neither are they gender-neutral.

Yet, only a few past studies have focused on societal dimensions, and more precisely gender dimensions in the STI diplomacy. Few that have done so discuss gender representation in world science Expo (Cohenmiller et al., 2020) and gender differences in international collaboration of scientists and engineers (Frehill and Zippel, 2011). In addition to these, some new international programmes have been established to either enhance feminist technologies, or the integration of women into STI workforce. For example, the United Nations Generation Equality campaign, emphasise themes of technology, innovations and equality (UN Women, n.d.). Some other examples are presented by UNIDO and ILO who look at the potential impact of advanced manufacturing and automation on issues such as (un-)employment, gender and youth (Lejiten, 2017: 20).

To summarise, we argue that the STI is becoming increasingly international, and it deals increasingly with global challenges. We also argued that STI fields are rather exclusive than inclusive, and that the same applies to the sphere of international relations. We also argued that according to gendered organisation theory, this might be a result of the gendered structures, practices, and cultures where international STI collaboration is executed. Next, we will explore what our case study reveals of integration of feminist foreign policy principles in the international STI collaboration.

2. THE CASE STUDY SETTING

2.1 *The case selection*

We have selected four different institutions for the case study from Finland, Spain, South Africa and Mexico. Two of the institutions are from countries of the Global North and two from the Global South, aiming to explore the different ways in which has been adopted, developed and linked to the gender mainstreaming of international STI collaboration. The four-country selection, and the comparability it allows, partially aims to overcome important gaps in the literature of FFP. First, the lack of comparison between countries and regions (an exception being the study by van Wyk, 2023), and second the side-lining of the Global South in the study of FFP and pro-gender practices (Parashar and D'Costa, 2017). Indeed, the literature on FFP evidences a lack of engagement with empirically focused studies. The literature which exists favour almost exclusively the cases of Sweden and Canada (e.g., Thomson, 2020; Tiessen and Swam, 2018).

Third, besides geographical focus of the studies, the literature tends to present FFP as rooted in state practices, implying an exclusion, or at least a limited role, of civil society in FFP uptake and development (Achilleos-Sarll et al., 2023). Considering that, our study selects cases which bring empirical insights from both state entities and civil society institutions, specifically from non-profit development organisations. Core principles of FFP are very often seen in civil society advocacy work, namely the call for equal representation of women and the emphasis on how women are more vulnerable in the face of certain situations, such as war, climate change, health crisis, economic crisis, etc. Our understanding is that results may be misleading if we only look at state institutions, whenever studying FFP and the impact it has on other policy levels, e.g. international STI collaboration.

These literature-based gaps, and the acknowledgement that the impact of feminist foreign policies should be studied not only in countries that have officially adopted the label of FFP, but as well in countries that vocalise an engagement and mobilisation of pro-gender justice foreign policy have thus been guiding the comparative case study setting (e.g., Stake, 1995).

We selected an institution as the unit of analysis to focus the analysis to an identifiable actor of STI dialogue given that without a strict focus the international STI collaboration remains vague. We selected national institutions, which are central actors in either innovation-related development cooperation (Fingo in Finland, GBVF in South Africa and La Coordinadora in Spain) or in a national science and technology system (Cinvestav in Mexico). By selecting different types of institutions, we intended to add variety to learn from different case contexts but more practical reason for the selection was access to these institutions. Two of the initial case organisations (in Mexico and Spain) had to be changed because of not getting access to the organisation to perform interviews.

The selected case countries also fit to the Global North and Global South research setting to understand how feminist foreign policies interact with international STI collaboration in contexts of differing socio-economic and political characteristics. A third dimension to add to the case study, concentrated on the core of our study, whether a country had adopted a feminist foreign policy, or pro-gender norms, or had not yet officially adopted these

approaches. As a result, the case study setting comprises of four different institutions from non-FFP countries of Finland and South Africa, and FFP advocate countries of Spain and Mexico. The case study setting is summarised in Table 1. The contexts of cases are further discussed in the forthcoming sections.

Table 1: Case study setting

FFP Country		Non-FFP	
Spain	<ul style="list-style-type: none"> ▮ Implemented FFP in 2021 ▮ Case institution: Spanish Development NGO Coordinator, La Coordinadora ▮ Aims to gender mainstreaming FFP throughout foreign affairs ▮ STI special section of foreign policy 	Finland	<ul style="list-style-type: none"> ▮ Case institution: Finnish Development NGOs Fingo ▮ Close cooperation with MFA, development agencies and private companies ▮ Special programme “Power Bank” focuses on technologies and innovations for gender equality & development ▮ Since the initiation of the UN Generation Equality campaign, FINGO has also been a member of the advisory group of the Finnish MFA
Mexico	<ul style="list-style-type: none"> ▮ Implemented FFP in 2020 ▮ Case institution: Center for Research and Advanced Studies of the National Polytechnic Institute (CINVESTAV-IPN) ▮ Promotes internationalisation of STI, and operates closely with MFA 	South Africa	<ul style="list-style-type: none"> ▮ Case institution: Gender-Based Violence and Femicide (GBVF) Response Fund ▮ Forerunner as doner in development cooperation, known for comprehensive gender perspective in foreign policy

To structure our analysis, we look at the organisational microfoundations as domains through which gendering can take place. This approach builds on the work of organisational capabilities (e.g. Barney 1991). At a more detailed level we look at processes, tools, structures, and resources and how they are operationalised for gender mainstreaming (Teece 2007; Felin et al. 2012). This approach is compatible with the gendering organisations theoretical domains i) gendering practices and structures, ii) gendering cultures and v) organisational logic, and thus offers a method for a more concrete analysis.

2.2 CASE: Mexico

Mexico was the first Latin American country and the first country in the Global South to adopt the FFP in 2020. According to the Government of Mexico, its FFP is a “hallmark policy” of its Foreign Minister, as it aligns with the country’s “ambitious multilateral policy and reinforces the Mexican government’s commitment to the agenda of gender equality and non-discrimination” (Government of Mexico, 2020). The Mexican FFP is to be implemented between 2020-2024 and has five core principles: (1) gender perspective and feminist agenda abroad, (2) parity within the Foreign Ministry, (3) a Foreign Ministry safe for all and free of violence, (4) visible equality, and (5) feminism in all areas of the Foreign Ministry (Government of Mexico, 2020). Thus, according to Hicks (2021, p. 14),

Mexico's FFP bears much similarity to the French feminist diplomacy, in its approach to reforming and improving the country's foreign ministry from within.

The FFP framework was adopted within the first leftist government, elected in 2018, since Mexico's transition to a multiparty democracy in the beginning of 2000. Although having adopted FFP in 2020, Mexico's government has developed public policies on gender equality for the last decades. The roots of Mexico's FFP lie in the National Development Plan 2001-2006 and the INMUJERES (the National Institute of Women) a decentralized public agency of the Federal Government. The agency works for the incorporation of the gender perspective in government public policies and to the national policy on substantive gender equality. In keeping with the development guidelines established at national level, the law creating the INMUJERES provides for preparation of the National Plan of Equality of Opportunities and Non-Discrimination against Women, 2001-2006 (PROEQUIDAD) as a follow-up to the National Programme for Women (1995-2000), which was applied in order to implement paragraph 297 of the Beijing Platform for Action, regarding the preparation of national action plans. (INMUJERES, 2004)

As a result of these efforts, the National Development Plan 2013-2018 established gender equality as a policy and objective of the State, focused on achieving substantive equality. Within this context, the 2014 political-electoral reform brought to the constitutional level the gender parity in candidacies for Federal and State Congress. In July 2018, UN Women Mexico installed the International Cooperation Bureau for Gender Equality in Mexico (Mesa de Cooperación Internacional para la Igualdad de Género en México - MCIG) as platform for dialogue and the exchange of experiences in Mexico. The table is established for the advancement of gender equality and the empowerment of women and girls in Mexico through an informal space for exchange and strategic coordination with the international community.

Enclosed in the President of Mexico Andrés Manuel López Obrador (AMLO's¹) government, the new National Development Plan (2019-2024) points to gender equality as one of the guiding principles stating the pursue of "[...] substantive equality between women and men, the dignity of the elderly and the right of young people to have a place in the world", and the intention to adopt specific strategies mentioning the combat of violence against women (Gobierno de Mexico, 2019). In this context, in 2020 gender-based political violence was recognized as a crime, with subsequent consequences as in terms of prevention, support, repression and punishment to federal, state and municipal authorities (Garay, 2020). In the same year, an important program encompassing the search for gender equality was created: the Institutional Program (Programa Institucional) in June 2020 from the National Women Institute (Instituto Nacional de las Mujeres) and the National Program for Equality between Men and Women (Programa Nacional para la Igualdad entre Mujeres y Hombres) in December 2020. It was also in 2020 that the FFP was adopted, as a continuation of national and international movements towards gender equality policies.

However, although the existence of the aforementioned actions, as the adoption of FFP, there have been strong criticism on the approach the government has taken to gender perspectives within the country. News reported that, when various feminist

¹ AMLO comes from initials of President of Mexico Andrés Manuel López Obrador

manifestations have taken the country against gender violence, the president acknowledged them as influenced by right-wing opponents (e.g. Phillipson and Velasco, 2022; Malkin, 2021). The adoption of FFP in Mexico is the result of previous initiatives, and it opened the door for public debate with feminists from the local and international continuum that will have demands for participation and of accountability. The authors claim that this opportunity must be used and propose engagement, under the threat of “Mexico’s feminist foreign policy risks merely paying lip service to a de facto patriarchal government” (Phillipson and Velasco, 2022).

2.2.1 Case study organisation: CINVESTAV

Cinvestav, Center for Research and Advanced Studies of the National Polytechnic Institute, is a Mexican non-governmental scientific research institution affiliated with the National Polytechnic Institute. It is responsible for training high-level researchers with national and international impact, focusing on solving country's problems. The organisation was created in 1961 by presidential decree, as a decentralised public body that currently has twenty-eight research departments distributed among the nine campuses throughout the country. Cinvestav is a key science, technology, and innovation institution with an important international dimension, especially when contextualising the importance of science diplomacy in Mexico’s foreign policy (Silva et al., 2022). Furthermore, due to its relevance to the national scientific ecosystem which aims for its international projection throughout its researchers, the Cinvestav was chosen as the case institution of Mexico, to understand the relationship between the feminist foreign policy and the gender mainstreaming in STI policies in Mexico.

2.3 CASE: Spain

After the Francoist regime, in the mid-1970s, gender equality was at low level in Spain. In 2021, gender equality score shows good development among the 27 EU Member States, and the development was further strengthened by Spain’s adoption of Feminist Foreign Policy in the same year.

Currently, especially since Sweden dropped FFP from their foreign policy agenda, Spain is considered a forerunner in the implementation of FFP in Europe (Thompson et al., 2021). Given that Spain has adopted FFP only in 2021, little research exists from Spanish FFP implementation providing this case study an interesting viewpoint to implementation of feminist perspectives in STI. According to the Guide to Feminist Foreign Policy (2021), country’s foreign policy focuses on mainstreaming a gender approach to have more inclusive and transformative foreign policy governance and defending diversity to embrace more open and inclusive societies. Focus of Spanish FFP is largely on gender mainstreaming of Foreign Service, but it also emphasises societal engagement and inclusion of various stakeholders and building of alliances to increase ownership of the feminist principles.

Like Mexico, also Spain underline intersectionality and diversity which encompass for example gender, ethnicity, sexual orientation, economic status, religious belief as well as disability and place of origin (Thompson et al., 2021; Government of Spain, 2021). Spain’s ambitious feminist agenda reaches many priority areas from trade and defence to climate action.

Spain aspires to be an international reference in its commitment to gender equality around the world by paying emphasis especially on existing gaps in economic issues and equal opportunities. It will exploit the plan through regional initiatives and aims to tighten ties with civil society through the Spanish Agency for International Cooperation and Development (AECID). To verify progress, FFP mandates an annual public reporting that needs to be presented not only to the parliament but also to stakeholders including civil society. The Spanish FFP will also aim to advance women's leadership and political participation in the peace and security agenda.

Some gender mainstreaming initiatives introduced are for example training for Foreign Service personnel to counteract gender-based violence and complying the rule of 40:60 balanced representation in official MFA events, like panel discussions². The latter rule complies to all events that Spanish civil servants are invited to participate even as invited guest speaker.

2.3.1 Case study organisation: La Coordinadora

The case institution is the Spanish Development NGO Coordinator, La Coordinadora which is a national network of a variety of development cooperation actors: its network comprises for instance 75 partner NGOs and its work spreads to more than 100 countries. It was founded in 1986 and it focuses on international solidarity, humanitarian action, education for global citizenship and the defence of human rights.

Given that the Coordinadora strongly advocates gender equality in its operations, it is a core actor implementing Spanish feminist approaches in foreign cooperation. The Coordinadora advocates feminist approach which shows in making visible the role of women in development processes and promoting actions to integrate the feminist approach in all processes of the cooperation policies and programs. It further states a feminist cooperation as one its areas of work. By feminist cooperation it refers to transforming societies to be more equal and reach better coherence in policies that come to ensure human rights, equality between people and protecting of the environment. Because of the firm feminist approach in development cooperation, the Coordinadora provides an opportunity to observe concrete practices of how inequalities in societies and in STI, if not directly but indirectly, can be addressed.

2.4 CASE: South Africa

Although two countries in Africa have embraced the label of FFP – Libya in 2021 and Liberia in 2022 – our selection of South Africa, which has not formally adopted the banner, is robustly justified. South Africa has at different levels (regional, continental and transcontinental) and in various fields in international dialogues, shown its commitment to pro-gender justice foreign policy. Its prominence has been noted in the support for the adoption and implementation of the Women, Peace and Security (WPS agenda) (van Wyk, 2023), the United Nations' framework for ensuring women's rights, mainly in fragile

² <https://cz.boell.org/en/2022/12/22/spanielska-velvyslankyna-nadpriemerna-rodova-rovnost-je-u-nas-vysledkom-obrovskyh> (accessed 26.6.2023)

and conflict settings. South Africa has contributed to the implementation of the WPS agenda since it was adopted by the United Nations Security Council in 2000. In addition, the country has a relevant role in supporting the attainment of the WPS agenda at the regional level, both through the Southern African Development Community (SADC) and the African Union (AU) (Cold-Ravnkilde, 2019). South Africa's leadership role was further reinforced through the Brazil-Russia-India-China-South Africa (BRICS) grouping, generally understood as the Global South rival to the Western-centred Group of 7 (G7) bloc. Thus, its relevance in representing the so-called Global South, and in particular the African continent, is another reason why South Africa is an important case in our research.

South Africa has also been a provider of development assistance to African countries, an area of policymaking in which gender issues are often given particular attention (Haastrup, 2020). As such, it presents a third interesting aspect to our research: given that it has not formally adopted the label of FFP and given its leadership in development assistance across Africa, the country allows us to shift the usual focus on FFP as rooted in state practices. Furthermore, it is a case through which the importance of civil society organisations (often the implementors of international cooperation initiatives themselves) is more pronounced. In South Africa, the role of civil society in policy transformation, namely with regard to gender equality, has been prominent since during the fight against the apartheid system (Waylen, 2007; Cold-Ravnkilde, 2019). This is also one of the reasons why we opted to investigate the case of a public-private partnership supporting, funding and working directly with a wide range of civil society organisations across the country.

On the other hand, despite boasting progressive GBV laws, South Africa still maintains one of the highest GBV incidence rates in the world. This contradiction and apparent inefficacy of policies to address GBV, however, makes the case more relevant. Recent policy initiatives worth highlighting include the Emergency Response Action Plan (ERAP), launched in 2019. This action plan started as a six-month emergency initiative, which focussed on five key areas of intervention, including, to what is most relevant to our paper, the facilitation of economic opportunities for addressing women's economic vulnerability. A 2021 assessment of the ERAP by the National Commission for Gender Equality did reveal, however, that many of the interventions were not achieved as expected. According to the assessment, despite some of the initiative's positive results, much remains to be done (Commission for Gender Equality, 2021).

Another important initiative was the 16 Days of Activism for No Violence against Women and Children Campaign. South African has been taking part in this annual UN worldwide campaign, which takes place from November 25 to December 10, and focuses on raising awareness about GBV and femicide. President Cyril Ramaphosa has been particularly vocal about celebrating the 16 Days Campaign, particularly as GBV emerged as one of the first major crises in the second term of his presidency, after the deaths of three South African women as a result of GBV in 2019 (Ramaphosa, 2019). Partially in response to these events and the widespread call to end GBV in the country, the President launched the National Strategic Plan on GBV and Femicide (Department of Justice and Constitutional Development, South Africa, 2020) in 2020, which is centred around six pillars: (1) accountability, coordination and leadership, (2) prevention and rebuilding the social cohesion, (3) justice, safety and protection, (4) response, care, support and healing, (5) economic power, and (6) research and information management

(NSP-GBVF, 2020). A key initiative charged with the responsibility to implement the NSP-GBVF is the Gender-Based Violence and Femicide Response Fund I, which is taken as the case study in South Africa, in our research, considering its role in pillars 5 and 6 of the NSP-GBVF.

2.4.1 Case study organisation: Gender-Based Violence and Femicide Response Fund

The analysis of the South African case is based on the Gender-Based Violence and Femicide (GBVF) Response Fund I, which is a public-private partnership led by the President of the country. The Fund was launched in 2021 and its mandate is to implement the six pillars of the National Strategic Plan on GBVF (NSP-GBVF). Besides being an initiative that links the public and private sectors to implement its mandate, it further engages with a high number of civil society organisations across the country, thus allowing for the importance of these to emerge within a context where often state institutions have deserved the greatest focus of analysis.

Aside from the justifications presented above on why the case of South Africa is relevant, the case of the organisation selected finds justification, to start with, in the fact that it is the largest initiative in the country aiming to address all the pillars of the NSP-GBVF. In addition, besides being an initiative that links the public and private sectors to implement its mandate, it further engages with a high number of civil society organisations across the country, thus allowing for the importance of these to emerge within a context where often state institutions have deserved the greatest focus of analysis, as already pointed out above. Furthermore, because the implementation of the GVBV Response Fund I mostly depends on a sort of cascade model, through funding of other organisations working on gender in various fields and geographic regions, their capacity of mapping and data generation is seen as relevant. The timeline of analysis – 2021-2023 – is, however, relatively short, given that the Fund was launched only in 2021. The first couple of years of activity of the Fund provide nonetheless important references to understand recent pro-gender policies within the country and its contribution to gender mainstreaming in sectors including science-related ones, namely science policy, economic empowerment, and education.

2.5 CASE: Finland

Although Finland has not framed its foreign policy as 'feminist', gender equality and equity have been emphasized in its foreign policy actions to different degrees for decades. The recent Rinne/Marin government 2019-2023 in particular had a strong emphasis and commitment to gender equality, equity, and human rights, compared to its predecessor(s) (Vastapuu, 2020). Furthermore, the Minister of Equality of Marin's government stated that their goal is to elevate Finland as the "leading gender equality country in the world", promote gender equality cross-cuttingly in all foreign policy actions, and advocate for a gender transformative approach within EU (Vastapuu, 2020, p. 6). In contrast to this, the latest gender equality plan for development cooperation was from 2007, and the gender equality actions of the Sipilä Government 2015-2019

only comprehended the execution and ratification of the Istanbul Convention (Jauhola & Lyytikäinen, 2020).

A recent study commissioned by the Finnish MFA concluded that Marin's government addressed gender (in)equality by promoting women's participation in decision-making, supporting women's rights organisations, combating gender-based violence, supporting economic empowerment and promoting gender-responsive budgeting, and addressing gender in peacebuilding and humanitarian responses (Vastapuu & Lyytikäinen, 2022). Gender mainstreaming was considered most effective in Finnish development policy, where the reproductive rights of women and girls, combating gender-based violence, and a crosscutting emphasis on the rights of women and girls with disabilities was emphasized (ibid). As such, the Rinne/Marin government approach to gender equality in foreign policy bears much resemblance to the Swedish neoliberal and human rights approach to gender in foreign policy. Furthermore, Jauhola & Lyytikäinen (2020, p. 155) see a strong legacy of "UN feminism" in Finnish foreign policy, where state feminism and promoting gender equality as part of development policy are prioritized.

While the latest Rinne/Marin government took large steps towards a feminist foreign policy, there has been several barriers in implementing these policies in practice – among these are the lack of consistency and strategical guidance, changes in the European operational environment and in Finnish political agendas, and lack of resources (Vastapuu, 2020). During Rinne/Marin's government, the gender equality policy is led by the Ambassador of Gender Equality, a post established in early 2010. However, Vastapuu (2020, 7) notes that there are scarce resources allocated to their work, and their gender equality work is largely dependent on the ambassador's choice of activity in the matters. In addition, Vastapuu & Lyytikäinen (2022, p. 4) conclude that while Finland effectively promotes gender-equality in development cooperation and human rights policy, security and defence policy suffer from "gender amnesia". Similarly, to other Western states applying feminist or gender policies in foreign affairs, the Finnish approach has also been seen heteronormative and binary, with a thin intersectional approach (mainly limited to the rights of women and girls with disabilities), and an emphasis on true, "Western" feminism (Jauhola & Lyytikäinen, 2020; Vastapuu 2020).

The past four years provide an interesting ground for studying the intersections of feminist or gender in foreign affairs, and science diplomacy, as Finland has also recently placed emphasis on gender mainstreaming in research, technology and innovations in its foreign affairs. Furthermore, during the Finnish EU Presidency, Finland organized two conferences regarding gender mainstreaming in the ERA, and as a joint outcome, the Helsinki Call for Action, "Advancing gender equality in research and innovation in Europe" was published on 1 November 2019. Under the UN Generation Equality (2021-2026) global campaign, Finland also holds a leading role in the thematic area "Technology & Innovation for Gender Equality". The Action Coalition on Technology & Innovation for Gender Equality focuses on four concrete goals: Bridging the gender gap in digital access and competences, Investing in Feminist Technology and Innovation, Building Inclusive, Transformative and Accountable Innovation Ecosystems, and Preventing and Eliminating Online and Tech-facilitated GBV and Discrimination. Under the campaign, Finland has funded and launched several campaigns, such as the "Algorithm for Equality" and the "Powerbank project", both of which tackled topics of gender gap in access to technology and gender-based violence.

2.5.1 Case study organisation: FINGO

FINGO (Finnish Civil Society Organizations for Development Cooperation) is a network of Finnish civil society organisations (CSOs) that work on development cooperation and humanitarian aid. FINGO collaborates closely with the Finnish MFA and other government agencies to implement Finland's development cooperation agenda. This collaboration takes various forms, such as joint planning, funding, and implementation of development programs and projects.

In this context, FINGO as a national platform for CSOs focused on development, functions as a link between the Finnish civil society, global development community, and Finnish foreign policy, equality and technology. Furthermore, FINGO has recently recognized the transformative potential of technology and innovations and encouraged its member organisations (MOs) to use technology as a tool to drive positive change in developing countries, particularly to tackle global inequalities and the rights of women and girls. A recent example of this is the Powerbank project (2020-2022), financed by the Finnish MFA, to support "Finnish and Eastern African civil society organisations to network and collaborate more with businesses, to increase knowledge and skills on digitalisation, innovation, and collaboration with the private sector, and to experiment and apply technological solutions more" (van Marwijk & Blommestein, 2021, p.3). The project placed emphasis on gender equality, the status of women and girls, in a cross-cutting manner during the project, and produced several technological solutions to tackling GBV, and the sexual and reproductive health of women and girls. The Powerbank project also offered learning material, including information on how gender and technology intersect in the work of CSOs (van Marwijk & Blommestein, 2021). Since the initiation of the UN Generation Equality campaign, FINGO has also been a member of the advisory group of the Finnish MFA (FINGO Programme 2022-2025).

3. QUALITATIVE ANALYSIS

The research setting is a comparative case study (Stake 1995) on selected governmental and non-governmental institutions adopting the label of FFP, and with those that are not officially advocating FFP.

3.1 *Secondary data collection and analysis*

3.1.1 *Document analysis of gender in STI policies*

An interesting source for understanding connection of FFP and STI are policy documents retrieved from the STIP Compass³. STIP Compass is the publicly accessible portal that provides access to the EC/OECD international database on STI policies. The existing studies have derived a range of useful findings on, for example, trends in the policy mix in different countries, and similarities/differences in national policies (e.g., Kergroach, 2019, Magro & Wilson, 2019). For the Gender STI project, we identified 355 STI policies with 'gender content' reflected in the concepts like inclusiveness, diversity, equality, and gender, which represent 3% of the STI policies in the database (approx. 11,215 STI policies). The data collection was performed in spring 2023. Although the results of the policy document analysis will be introduced in a forthcoming deliverable of Gender STI project (Deliverable 1.4), the policy document data gave valuable insights for performing this study and understanding role of feminist approaches, e.g., gender content, in national STI policy agendas.

3.1.2 *Document analysis of FFP and STI*

Besides exploring the STI policies, we performed a document analysis to learn the FFP approach, or its absence, in the case countries and learn about case institutions and their position to FFP. Collection of secondary data consisted of the most recent (namely 2019-2023) national foreign policy and development cooperation documents and case institution related strategies, action plans and evaluations (see Table 2). Given that the case institutions differ e.g., in age and role, the document collection was subject to availability however keeping in mind the comparative aspects of the study. List of reviewed documents is available in Annex 1. In addition to 24 policy and strategy documents, we collected and reviewed 8 media articles related to adoption of feminist policy in the case countries. These articles were for example articles and blogs published online.

Table 2: Secondary data collection

³ <https://stip.oecd.org/stip/> (accessed 21.6.2023)

	Spain	Mexico	Finland	South Africa
National policy documents (e.g. foreign policy; STI policy)	3	2	3	5
Institution-related documents (e.g. strategies, action plans)	2	2	6	1
Other (e.g. press releases, blogs, etc)	2	4	1	1
Total	7	8	10	7

Our document analysis proceeded with a structured template which focused on revealing national foreign policy approaches and their connection to technology and innovation domains.

3.2 Primary data collection and analysis: interviews

Based on the literature review and document analysis, a semi-structured interview guide was developed to collect primary data by interviewing key informants in the respective case institutions. One of the decisive factors for performing interviewees was access, namely interviewees willingness to discuss about the topic. Details of the interviews and persons interviewed are provided in Table 3.

Table 3: Summary of interviews

	Spain	Mexico	Finland	South Africa
Number of interviewees	3	2	3	1
Gender	3 women	2 women	2 women, 1 man	1 woman
Positions	2 researchers from Brazil and Nicaragua, both working in connection with case organisation. 1 person who has worked in the case organisation as president.	two researchers from case organisation both dealing with public policy	3 advisers of innovation and development and development policy	CEO
Style of interview	Online, 2h30 hours group interview	Online, 2 hours individual interviews	In-person, 2 hours group interview	Online, 1 hour individual interview

We have interviewed in total 9 persons from the case institutions. Some of the interviews were group interviews, and some individual interviews. Given the international nature of

the research setting, majority of the interviews were performed online. Most of our interviewees were female.

4. RESULTS

4.1 *Insights on feminist approaches in STI policy dialogues*

According to STIP Compass data of 355 STI policy documents, numerous countries have launched gender-specific equality policies in STI domains in recent years, signalling that the topic is rising to the top of their domestic agenda. However, gender dimensions do not seem to gain prominence in STI policy discourse over time. Comparison of FFP and non-FFP countries' policies in turn reveals that countries which have adopted FFP show, like expected, some policy integration that also has started earlier compared to non-FFP countries. However, the integration of policies seems rather similar in both groups, no significant difference in the pattern is observed.

Another observation on gender mainstreaming in STI based on STIP Compass data is that clear majority of policies focus on improving positions of women in STI fields, that is improving gender balance in scientific careers and decision-making while integrating gender dimension in R&I content is less addressed in policies. This observation shows that activities of gender mainstreaming have largely focused on improving the number of females and their positions in STI, putting less emphasis on improving capabilities in gender mainstreaming, for example training on how gender and inclusiveness can be addressed in research. Similar findings were reached from the mapping of international STI agreements study conducted as part of the GenderSTI Project regarding less emphasis on gender content (GenderSTI Project, 2021).

4.2 *Results of FFP in STI related domains* *international institutions'*

This section introduces results of case studies introduced in Section 2. This analysis relies on interview data and document analysis aiming to explore microfoundations as domains in the organisations through which gendering can take place. Table 4 summarises processes, tools, structures, and resources and how they are operationalised for gender mainstreaming in the case institutions. This approach is compatible with the domains suggested in gendered organisations which is hoped to reveal the institutional drivers and barriers that enable or halt integrating gender dimension in to STI related collaborations.

Table 4: Observed microfoundations in the case institutions

	Finnish Development NGOs Fingo – <u>institutional learner</u>	Gender-Based Violence and Femicide (GBVF) Response Fund – <u>institutional interlocutor</u>	Cinvestav, Center for Research and Advanced Studies of the National Polytechnic Institute – <u>institutional educator</u>	The Spanish Development NGO Coordinator, La Coordinadora – <u>institutional ambassador</u>
Structures	<ul style="list-style-type: none"> • Deep reflection of institutional loci and strategy to understand gendered logic on organisation • Mainstreaming equality principles throughout programmes – strategy work 	<ul style="list-style-type: none"> • Organizational loci as an executive arm of the national strategic plan on GBV and femicide. 	<ul style="list-style-type: none"> • Material Conditions: Addressing barriers and ensuring availability of educational opportunities • Strategic Leadership Positions: Paying attention to the representation of women in leadership positions, considering intersectionality, and promoting inclusive decision-making. 	<ul style="list-style-type: none"> • Fostering Dialogues: Promoting dialogues between Spain and local communities from other countries affected by feminist foreign policy, acknowledging different cultures and logics, and strengthening alliances with the feminist movement at local, national, and international levels.
Processes	<ul style="list-style-type: none"> • Critical reflection and learning process (systematic education, courses and dialogue) • Dismantling power relations within institution (inclusive knowledge production) • Gender mainstreaming organisational strategy • Ensuring inclusive project designs and leaving implementation enough time • Personal ownership and sufficient resource allocation • Barriers: emotional resistance + - labour 	<ul style="list-style-type: none"> • Engagement with public and private entities - providing training on how they do to eliminate GBV (incl. financial support and training). • Advocacy and awareness, collaborations, monitoring of gender injustice status in country. • Barriers: cultural/contextual diversity in understanding social and gender rights can vary - approaches must constantly be adapted and time is needed to expect change. 	<ul style="list-style-type: none"> • Substantive Equality: Advocating for policies that address material conditions, align with gender equality goals, and avoid contradictions with other policies. • Organisational Actions: Implementing initiatives to increase women's representation in specific fields, conducting workshops to promote girls' interest in STEM, and aligning actions with organisational values. 	<ul style="list-style-type: none"> • Evaluating International Cooperation: Considering the perspectives of countries in international cooperation dynamics and analysis, avoiding the maintenance of colonial status quo logic, and utilising the agency and experience of vulnerable communities for a comprehensive analysis of local and global problems.

<p>Tools</p>	<ul style="list-style-type: none"> • Positionality reflection & education for employees to understand their own role in gendering processes • Human-centred design to ensure inclusive and reflective project • Gender quotas in projects to ensure diversity of representation 	<ul style="list-style-type: none"> • Training, capacity building for others; to ensure contextually situated understanding how gender relations emerge in institutions' work • Gender mainstreaming project designs and quotas within own organisation to ensure diversity and inclusive in projects 	<ul style="list-style-type: none"> • Intersectionality: Recognizing and addressing the intersection of gender discrimination with other forms of oppression, such as class, ethnicity, and sexual orientation, in policy development and implementation. 	<ul style="list-style-type: none"> • Funding Agencies: Recognizing the role of funding agencies as important vectors for feminist foreign policies, ensuring that their agendas reflect feminist principles and address the masculinization of science, technology, and innovation (STI). • Intersectionality Analysis: Recognizing the importance of analysing the layers compounding the intersectional foreign policy and understanding the different markers that intersect with gender, patriarchy, racism, and colonialism.
<p>Resources /skills</p>	<ul style="list-style-type: none"> • Participatory/inclusive project design. • Ensure enough resourcing for inclusive processes (as they can be slow) 	<ul style="list-style-type: none"> • Relying on external expertise in dealing with complex matters can save time and money. Fund's resources and skills directed to raising awareness and providing assistance to all kinds of organisations 	<ul style="list-style-type: none"> • Recognizing and responding to sexual and physical violence against women • Global and Local Alignment to understand the interconnectedness of global and local issues, advocating for collaboration between global and local initiatives, and considering local perspectives in global decision-making. 	

4.2.1 Institutional learner: FINGO (Finland)

We explored the mainstreaming of diversity, equality and inclusion in technology-based operations of Fingo on the level of organisational structures, processes / implementation, tools and resources that have been deployed in order to ensure equal and gender balanced approaches.

Although feminist principles (gender equality and mainstreaming, addressing structural global issues causing inequalities, decolonization, and intersectional outlook) are visible as part of FINGO's strategic and operational actions, the word feminism is not used in any of the FINGO documents. Rather, FINGO states that throughout their work, "reducing inequalities", "promoting human rights", and achieving "a just world for everyone" are among their basic tasks. For example, in the operational plan of 2023, FINGO considers diminishing inequality and dismantling structural discrimination, as thematic priority areas in training and improving the capacity of their staff. This document is also a good example of how the word "gender" or "women" were not specifically used, but rather FINGO speaks of "equity", "equality", and "decolonization", and the importance of listening and including various voices in decision-making. Thus, like often in Finnish policy documents (see for e.g., Vastapuu 2020), it is sometimes difficult to detect whether the organisation is discussing about gender equality or equity.

In some of the documents, however, FINGO does outline gender mainstreaming specifically as being integrated either as a cross-cutting theme or a specific focus area and objective, for example in seminars, workshops, and projects. The FINGO programmes and strategies are widely based on the Agenda 2030 framework, and as such includes the goal to achieve gender equality and empower all women and girls (inclusive economies, societal systems, decision-making processes). To reach this objective, FINGO provides "learning opportunities" for their MOs and that they have a gender working group to support the work of the MOs. Through SDG goal 10 (reduce inequality within and among countries), the document states that FINGO addresses it through a systemic and human rights-based approach and considers the "multidimensionality and intersectionality" of human rights. Gender equality principles are also embedded in FINGO's practices when it comes to their employers and members and their treatment, where FINGO promotes a zero-tolerance policy for harassment and other forms of discrimination, and "roots out" any practices (action plans, communications, decision-making etc), that may exclude certain people.

The topic of technology in development cooperation had also risen as a thematic area for FINGO in 2019, and FINGO's documents discuss the importance of recognizing the fourth industrial revolution involving digitalisation and technology, how they are transforming the world, and how they often have been neglected among Civil society organisations (CSOs). More specifically, FINGO has created thematic guidance on the topic of technology and gender for its MOs, which is also "firmly anchored in the 2030 Agenda" and "human rights transformative approach", highlighting five core human right principles: (1) universality, interrelatedness, and indivisibility, (2) equality and non-discrimination, (3) participation and inclusion, (4) accountability, (5) transparency, which are all considered characteristics of FFP.

Technology is seen as a tool to "drive positive change in developing countries", so that "no one is left behind". On the other hand, FINGO recognises that the digital space and technology are not a space of equality, but have widened the gap between population groups, and on the other hand women and girls that do have internet access are more exposed to online GBV. However, by increasing access to digital tools FINGO views that we can also increasingly report and intervene in GBV. FINGO supports their MOs in the implementation of technology, and through trainings and other materials, and also partakes in the UN Generation Equality campaign as a member of the advisory group of the Finnish MFA, as Finland holds a lead role in the Action Coalition of tech and innovations. In its technology actions, intersectionality through the empowerment of women and girls with disabilities (a specific priority of Finnish foreign policy), is also mentioned.

Technology focus of Fingo is also demonstrated in the Powerbank project (financed by the Finnish MFA), which was evaluated by van Marwijk & Blommestein (2021). The project set to increase civil society's capacity for innovation, technological solutions, and private sector collaborations, and offer learning materials for Development NGOs, including information on how gender and technology intersect in the work of development NGOs. Based on its evaluation, it becomes apparent that the concept of gender equality and the status of women, the rights of people with disabilities (both of which are concurrent themes in Finnish foreign policy), were tackled both in the Powerbank project in a "cross-cutting" manner. The project had also produced materials on gender and technology for development NGOs, and inspired stakeholders to include gender as a cross-cutting theme in their activities and experiment with innovations and technology. However, based on the evaluation it was not clear whether these activities have led to an increase in the role of women and girls in technology.

One of the challenges pointed regarding Powerbank project was larger organisations have perhaps better abilities to cross-cuttingly integrate gender perspective. The evaluation also outlined several challenges in innovation-related development cooperation work, like the resistance to change (the idea of technological solutions), lack of technological and digital resources, lack of network and internet connectivity, on-size-fits all approach, limited human and financial resources, and restricted time. As other general challenges/drivers, pointed out also in the interview, for FINGOs causes were the "shrinking space for civil society", "changing landscape of development cooperation", "digitalisation, communication power, disinformation, and "new debates regarding aid and development cooperation", and the economic system.

FINGO aims for mainstreaming equality principles throughout its programmes and pursues to provide systematic education and training in gender substance for its employees and member organisations. However, to gain visible progress is challenging as achieving understanding for gender equality, not to mention capabilities to implement gender equality takes time. According to interviewees, processes can be extremely slow. One of the reasons for slowness is that gender topics are emotionally challenging that means it is important to pay attention to dialogue and discussion.

All in all, although much of the feminist and gender principles are incorporated in FINGO's actions, it was clear from the interview that gender positionality reflection should be a continuous process but even in organisation which has gender equality as

core focus of its operations, the reflection inside own organisation may be easily neglected.

Although Fingo has strong gender equality approach integrated in advocacy work and specific projects, it hardly implements strong feminist principles. The language used (equality, equity, inequality, decolonization, structural inequality) seemed to be used inconsistently in documents, suggesting that the gender mainstreaming and feminist principles were not used cohesively.

4.2.2 Institutional interlocutor: GBVF (South Africa)

The GBVF itself was set-up as an executive arm of the national strategic plan on GBV and femicide. It addresses the so-called 3 r's: rights, representation and resources through its actions, which include support (financial and training) to grassroots organisations, advocacy and awareness, collaborations, monitoring of gender injustice status in country, thus embodying principles similar to the Swedish FFP. According to GBVF Annual Report 2021-2022, the organisation implements gender mainstreaming across its procedures: from ideation, management, collaboration with partners, to team structure.

The GBVF also mention in their Annual Report 2021-2022 having a strategic project "digital/technical solutions for GBVF", which aims to investigate the use of digital innovations to prevent GBV. The Fund is investigating into current gaps in the use of such solutions and supporting its up-scaling, in particular in rural areas. The Fund is also working in collaboration with universities, namely to develop the GBVF Dashboard, a summary-type of platform with data on GBV in the country - data and social scientists involved in these activities. According to the interviewee, some collaboration takes place with universities and initial talks are taken with The Council for Scientific and Industrial Research (CSIR) which show link between tackling GBV and driving transformation in STEM/STI fields regarding gender equality.

South Africa's participation in BRICS also continues to provide tangible benefits for South Africans through science, technology, innovation, health and education cooperation, as well as through BRICS financing for infrastructure development, capacity-building, research and educational and skilling opportunities. However, the annual report tackling this issue (DIRCO Annual Report 2021-2022) does not make connection with STI and gender although both are separately emphasised.

A key challenge to the work of the Fund seems to be the cultural diversity that exists in the country, with different social groups understanding social and gender rights in very different manners - approaches must constantly be adapted and time is needed to expect change. In addition, the Fund is relatively recent, clear level of impact is still unclear.

4.2.3 Institutional educator: Cinvestav (Mexico)

The two Mexican interviewees presented very similar perspectives on the importance and impact of the FFP within the organisation and the national ecosystem. Both indicated that even though there are many national and institutional initiatives on gender equality, the main material conditions for women not only, but also, in STI are still holding back development of the matter. As we stated before, there has been criticism on the

approach the current government has taken to gender perspectives within the country, and one of the most cited examples is the elimination of the “Escuelas de Tiempo Completo”. These schools offered extracurricular classes in areas of high economic vulnerability in which children between the ages of 5 and 14 participated (García-Bullé, 2022⁴).

The closing of these school is likely to intensify the poverty conditions of the highly marginalized population. Families and children with critical level of poverty will be impacted, and especially women in a society that culturally still understands the role of the women as caretakers. Since women are the cultural caretakers of children, even when not mothers (here referring to sisters, cousins, aunts etc) the schools enabled a fairer condition for women in general: those who study, those who work in the market or those who work within the families.

The country has asserted substantive equality as one of its most important agendas, and states it, as example, in 2014, when Mexico enacted gender parity in congressional candidacies into law, and in 2019, the National Development Plan also expressed it as an objective. The interviewees also mentioned the search for substantive equality in country’s policies. However, they also stated that substantive equality only can be achieved if material conditions are available, and, in this sense, the decision of closing the “Escuelas de Tiempo Completo” goes in complete contradiction with the policies.

The interviews also pointed a strategic use of women in specific leadership positions in government. According to the interviewees, the choices seem to be made to create an impression of equality, although their behaviour pointed to the maintenance of the status quo, as the “Juanitas”. The Juanitas are women who are chosen to be run for congressional seats making the number of men and women balanced, but to give their place to their male substitutes (Sául, 2017). In this regard, the interviewees pointed the importance of which layers of intersectionality are being considered in the decisions.

Cinvestav itself is to take actions in the period of 2021-2024 to improve the percentage of female students and researchers particularly in areas such as engineering and exact sciences. The institute is for instance involved in running STEM workshops for girls in conjunction with the UNESCO Office in Mexico and the OECD representation and has stated increase of women postgraduate admission in technology areas with greater gender inequality as one of its strategic priorities in 2021-2024. Cinvestav aims to reach this goal by communicating to society development that can be reached through STI. The communication should also achieve greater inclusion of all groups. The institute has an ambitious vision to 2040 - to reach a gender balance. Overall, although Cinvestav has established and promotes principles and values of respect, fairness, equality, inclusion, tolerance, no discrimination, transparency to name few, it still gives in the official documents little tools to reach and maintain these organisational values.

One of the main subjects mentioned by both interviewees is the sexual and physical violence against women, especially feminicides. These sources of great concern were stressed by both, with citations about the importance of the feminist movements and the 8M manifestations. Within this context, the 8M manifestations (May 8th, Womens’

⁴ <https://observatorio.tec.mx/edu-news/cierre-escuelas-tiempo-completo-mexico/>

International Day) were referred as an important symbol of the country's political situation in this matter. The 8M manifestations took in 2020 the streets against gendered violence. Still, the response of the government was to create steel barriers around the national palace. The news described the situation as "a symbol of the division between the president and the women's movement", what was promptly covered with names of femicide victims⁵. In this regard, it is important to recall that the Institutional Program 2020-2024 and the National Program for Equality between Men and Women were created in July and December, respectively, of the same year.

Finally, intersectionality appeared at the interviews as an important topic. Both interviewees pointed to the assortment of power markers' layers that intersect, directly increasing the bias against women. The gender piles up with class, ethnicity/colour and sexual orientation markers, impacting the dynamics of discrimination. The interviewees implied the need of public policies with intersectional lens, able to approach problems with tailored and hands-on solutions.

Specifically concerning STI, although not mentioning the FFP or internationalisation efforts, it is noteworthy that both interviewees referenced the importance of the National Program for Equality between Men and Women's and its incorporation by Cinvestav. However, they also recalled that the Programs – as the FFP – came at the same moment the government placed public policies that changed other material conditions that negatively impacted women's lives, as the closing of the Escuelas de Tiempo Completo in 2021. As mentioned, the closing can be considered a public policy decision that contradicts the Programs' premises.

In this context, it is known that there has been some tension between the left-wing government and the feminist movements in Mexico^{6,7,8}. On the one hand, the feminist movement points out public policy decisions that impoverished women's lives and are not able to reduce the levels of violence against women; on the other hand, institutions and programs on gender equality are being created by the government along with international support initiatives.

The premise of the FFP is that there is a continuum between global and local levels. Thus, by considering that women and historically repressed groups are disproportionately affected in global problems, global affairs should be also determined by local policies. Therefore, FFPs should align with local level, separation of global and local issues is arbitrary and prioritizes a national/state-centered approach in opposition to one towards communities and human rights⁹. Local policy can meet global needs at the same time local problems can be tackled by global policies already thought and developed.

⁵ <https://www.theguardian.com/world/2021/mar/08/mexico-feminism-amlo-president-felix-salgado-macedonio> (accessed 26.6.2023)

⁶ <https://www.yalejournal.org/publications/feminist-foreign-policy-a-bridge-between-the-global-and-local> (accessed 26.6.2023)

⁷ <https://www.theguardian.com/world/2021/sep/29/mexico-amlo-president-feminist-movement> (accessed 26.6.2023)

⁸ <https://www.theguardian.com/world/2021/mar/08/mexico-feminism-amlo-president-felix-salgado-macedonio> (accessed 26.6.2023)

⁹ <https://www.yalejournal.org/publications/feminist-foreign-policy-a-bridge-between-the-global-and-local>) (accessed 26.6.2023)

4.2.4 Institutional ambassador: La Coordinadora (Spain)

The interviews highlighted the importance of broad approach on intersectionality in the analysis of FFP, especially by considering the international reach of Spain and its colonial history. The identification of the different layers of markers that intersect with gender in the policy development becomes a key objective to the development of FFP: apart from approaching the patriarchy and racism, it should also tackle the problem of colonialism. Therefore, according to interviewees, more than a general view of intersectionality, it is essential to analyse the layers compounding the intersectional foreign policy.

In this regard, the interviewees, working on the subject in non-governmental organisations, indicated that the Spanish FFP has been advancing some themes. Notwithstanding the development of an intersectional approach, with a broader vision of feminism, still lacks focus on one of the main layers to Spanish foreign policy: the decolonial feminism.

One of the interviewees pointed importance of fostering dialogues between the Spain and the local communities from other countries affected by the FFP. By recognizing the existence of different cultures and logics, the interaction between the countries with a FFP can go further than recurrent contemporary instruments - as planned joint calls in subjects following, very often, a European logic. La Coordinadora had set strengthening of alliances with the feminist movement, locally, nationally and internationally as one its goals for operation in 2019-2022. Specifically concerning the FFP's impact on STI, funding agencies appeared as key actors that should reflect these aspects in the development of their agenda. By mentioning how STI is still masculinized, the funding agencies were mentioned as important vectors for feminist foreign policies.

Another person, working with foreign policy evaluation, highlighted a lack of Latin American and African concepts in international cooperation dynamics and analysis. An interaction lacking other countries' perspectives may maintain the colonial status quo logic, therefore, by using concepts and objectives stemming from colonial countries and, therefore, using evaluation tools that measure the achievement of their own objectives. In this sense, the interviewee indicated that every government should consider the FFP's framework of using the agency and experience of vulnerable communities to provide a broader and deeper analysis of local and global problems, considered as a continuum.

A review of strategy documents of La Coordinadora reveal that feminist principles are well integrated in the values and activities of the institute. It is committed to gender equality and mainstreaming the gender perspective, and it has a gender policy in place. Furthermore, La Coordinadora strongly promotes an intersectional gender perspective to achieve these ends. La Coordinadora can be characterised as an ambassador of feminist principles – it does not only act but 'breath' gender equality.

5. CONCLUDING DISCUSSION

This explorative study does not yet reach firm conclusions and generalisations on how feminist (foreign) policy principles guide integration of gender dimension into international STI collaboration, but it can offer insights on, first, some differences in adoption of gender dimensions in STI policies between FFP advocate nations and non-advocates and, second, on the micro foundations of gender mainstreaming in institutions operating in the field STI dialogues.

According to STIP Compass data, numerous countries have launched gender-specific equality policies in STI domains in recent years, signalling that the topic is rising to the top of their domestic agenda. However, gender dimensions do not seem to gain prominence in STI policy discourse over time. Comparison of FFP and non-FFP countries' policies in turn reveals that countries which have adopted FFP show, like expected, some policy integration that also has started earlier compared to non-FFP countries. However, the integration of policies seems rather similar in both groups, no significant difference in the pattern is observed.

Another observation on gender mainstreaming in STI based on STIP Compass data is that clear majority of policies focus on improving positions of women in STI fields, that is improving gender balance in scientific careers and decision-making while integrating gender dimension in R&I content is less addressed in policies. This observation shows that activities of gender mainstreaming have largely focused on improving the number of females and their positions in STI, putting less emphasis on improving capabilities in gender mainstreaming, for example training on how gender and inclusiveness can be addressed in research.

Based on the case study, we can say that the national strategy documents (e.g. Foreign action strategies) largely neglect to integrate feminist principles and STI collaboration, namely innovation and technology related activities. For example, Spain has feminist principles visible in the foreign action strategy but address technology or innovation shallowly while Spanish STI strategy for 2021-2027 addresses women and gender via increasing involvement of women in STI but does not include any actions to improve capabilities of researchers to address gender equality or intersectionality. On the contrary, Finland, as non-FFP, country promotes innovation and technology without making strong link to women or gender equality.

South Africa and Mexico in turn have combined feminist principles in STI in strategy level. For example, South African's pro-gender and intersectional approaches are strongly present in public administration of foreign relations and science and innovation whereas Mexico places the strategic foundations of an STI policy in 2021-2024 on economic, social and sustainable development that emphasises multiculturalism, gender perspective and human rights.

As these mixed findings suggest, countries advocating feminist approaches do not necessarily translate into more gender prone STI policies. One of the reasons, as highlighted in the interviews, can be that feminist approach remains a metalevel approach, and is used for 'pink washing' only without a true bottom-up approach.

Once we turn perspective on the institution level, we observe integration of feminist and STI perspectives to follow similar pattern than national strategies. Institutional action plans tend to address either technology and innovation, or gender and women, hardly combining these. For example, the action plans of Finnish Fingo concentrate strongly on technology and innovation with general aims to decrease inequalities and discrimination whereas La Coordinadora shows an example of how to design development cooperation activities on feminist principles.

Based on the findings, key driving forces in adopting feminist agendas in international institutions is active engagement and push from leadership, personnel education on gender issues, self-reflection and tools that enable gender sensitivity in STI related projects. Making the institutions gender-sensitive can take place through an internal deliberation and reflection, which relies on education, positionality reflection, training on gender issues. However, gender mainstreaming demand translating gender dimension from strategies to project designs and local level activities. This translation process should be sensitive to localising and contextualising the gender terminology and language. As Thompson et al. (2021) point out, it is difficult to even assess what determines foreign policy as feminist, not to mention taking feminist approaches of Global North for example to local technology and innovation contexts of Global South. Observation of adaptation of language is evident from our four case contexts which show how gendering institutions are rooted in the local socio-economic, political and cultural contexts.

Furthermore, reaching gender equality, even in organisations working daily in matters of empowering women, is slow and sometimes turbulent. One of the reasons is that gender equality entails personal engagement that can be emotionally draining both to individuals and institutions. How to overcome such challenges? We suggest setting up and maintaining open, inclusive and continuing dialogue in the international STI community. This dialogue should be inclusive of STI community widely, including grass-root level actors, given that ministries and academia are often far from local contexts. A danger is that STI gendering adopts language that is not understood in the contexts that the international STI collaboration aims to benefit.

Even though gender equality clauses in strategies, action plans and agreements are important, it was noted that improving gender equality and gender mainstreaming in institutions demand most of all self-reflection of own positionality which can be facilitated with awareness raising, such as trainings and developing skills for participatory methods in the daily work of STI institutions.

The conclusions for feminist international STI collaboration are also relevant to the (still scarce) literature that investigates the conditions and results of the implementation of FFP practices. The findings suggest that countries advocating feminist approaches do not always translate into gender-prone STI policies, as feminist approaches may be used superficially without true bottom-up integration. Institution-level action plans tend to focus on either technology and innovation or gender and women, rather than combining the two. The study highlights the importance of active engagement and leadership, personnel education on gender issues, self-reflection, and tools for gender sensitivity in STI projects as key driving forces in adopting feminist agendas in international institutions. The process of gendering institutions involves internal deliberation,

reflection, education, and training on gender issues. However, gender mainstreaming requires translating gender dimensions from strategies to project designs and local-level activities. Achieving gender equality within organisations working on empowering women is a slow and sometimes turbulent process due to the personal engagement and emotional toll it can take on individuals and institutions.

The paper proposes the establishment of open, inclusive, and ongoing dialogue in the international STI community, involving grassroots actors and considering local contexts. It emphasizes the need for clear and accessible language in STI gendering efforts to ensure understanding and benefit in the intended contexts. Self-reflection, awareness raising, and training on gender issues are essential for improving gender equality and mainstreaming in institutions. Breaking governmental silos and establishing cross-sectoral working groups are recommended to integrate feminist principles into sectoral policies and strategies.

The policy implications

One of the main policy implications is that STI policy domain should be better aligned to foreign policy in national policy making. Based on our study, it was clear that technology and innovation domains do not have a common dialogue with foreign policy on the gender mainstreaming aspects. We see room for improvement in breaking governmental silos and setting up cross-sectoral working groups that address how feminist principles can be taken into account in sectoral policies and strategies.

Furthermore, policies should address institutional levels and encourage institutions to take on gender mainstreaming practices. These include, as our cases show, reflection of organisation's strategy against gender equality and equity, ensuring education to all personnel on gender issues, providing tools and assistance to ensure human-centred approaches and gender impact evaluation. Institutions can benefit from working together with organisations and institutions who are already forerunners in gender equality matters to gain further institutional learning.

These policy proposals aim to promote gender equality, inclusivity, and feminist principles in international STI collaboration. By integrating these recommendations into policy frameworks and institutional practices, governments and organizations can work towards creating a more equitable and diverse STI landscape that harnesses the full potential of all individuals, regardless of gender.

In summary, the policy proposals derived from this study are:

1. **Integration of Feminist Principles in STI Policies:** Governments should prioritize the integration of feminist principles in science, technology, and innovation (STI) policies. This can be achieved by aligning STI policies with foreign policy objectives, breaking down silos between different sectors, and establishing cross-sectoral working groups to address gender mainstreaming in STI. By incorporating feminist principles into policy frameworks, governments can promote gender equality and inclusivity in the STI sector.
2. **Promoting Gender Mainstreaming in Institutions:** Institutions operating in the field of STI should be encouraged to adopt gender mainstreaming practices. This

includes reflecting gender equality and equity in their organizational strategies, providing education and training on gender issues for all personnel, and offering tools and support for implementing human-centered approaches and gender impact evaluations. Collaborative efforts with organizations that have expertise in gender equality can facilitate institutional learning and best practices.

3. **Enhancing Gender Dimension in STI Policies:** STI policies should go beyond focusing solely on improving the representation of women in scientific careers and decision-making positions. There should be a greater emphasis on integrating the gender dimension in research and innovation (R&I) content. This can be achieved through training programs that educate researchers on addressing gender equality and inclusiveness in their work. By broadening the scope of gender mainstreaming, STI policies can address the systemic barriers faced by women and promote gender-responsive innovation.
4. **Contextualizing Gender Mainstreaming Approaches:** When implementing gender mainstreaming initiatives in international STI collaboration, it is crucial to contextualize and adapt the language and terminology to local socio-economic, political, and cultural contexts. This ensures that gendering institutions resonate with the local communities and are effective in addressing gender issues. Stakeholder engagement at all levels, including grassroots actors, should be prioritized to ensure inclusivity and relevance in the development and implementation of gender mainstreaming initiatives.
5. **Supporting Self-Reflection and Awareness:** Achieving gender equality and mainstreaming in institutions requires self-reflection and awareness of one's own positionality. Organizations should provide training programs and resources to facilitate awareness raising, foster critical reflection on gender issues, and develop skills for participatory methods in the daily work of STI institutions. By promoting a culture of self-reflection and continuous learning, institutions can navigate the challenges associated with gender equality and create inclusive environments for all individuals.

Limitations of the study

Because of time constraints, this study lacks additional interviews to learn about institutional processes in the case institutions. Indeed, deeper analysis of institutional processes could not be reached for this version of the study. It is also acknowledged that different country selection could bring different findings, therefore generalisation of the findings/ insights should be made carefully.

This study aims to be transformed as a peer-reviewed article that still demands focusing and polishing of the research. The current version is the 1st draft of an envisaged article.

ANNEX 1: LIST OF REVIEWED DOCUMENTS

Finland	Book chapter	Book chapter "Kutistettu feminismi? Suomen ulkosuhteiden tasa-arvopolitiikka kylmän sodan YK-feminismistä 2010-luvun tolkkutasa-arvoon" (Jauhola & Lyytikäinen)	https://drive.google.com/file/d/1pCBLexajXPatC4MbHykFm9-MC83GYTdT/view?usp=sharing
	Report	Evaluation of the Finnish Development Policy Influencing in the European Union Thematic brief – Gender equality, by the Finnish MFA in 2022	https://drive.google.com/drive/folders/1ANqGJ0BkSQJGjzJagY_IJIPw4fdZ_7Wj
	Report	Tasa-arvon edistäminen ulkopoliitikassa, ml. kansainvälinen ilmastopolitiikka. (A report commissioned by Plan International Finland on promoting equality in Finnish Foreign policy), 2020	https://drive.google.com/drive/folders/1ANqGJ0BkSQJGjzJagY_IJIPw4fdZ_7Wj
	Report	Gender Equality in Finnish Foreign Affairs from 2019 to 2022.	4aef250d-4d89-41cd-d390-6059951d4aa9 (um.fi)
	Strategy	FINGO Strategy 2021-2024	https://fingo.fi/wp-content/uploads/2020/12/strategiafingo20212024final.pdf
	Evaluation report	Evaluation report: FINGO Powerbank project	https://fingo.fi/wp-content/uploads/2022/03/Final-evaluation-Report-Fingo-Powerbank.pdf
	Programme report	FINGO Programme 2022-2025	https://fingo.fi/wp-content/uploads/2022/02/1.-Fingo-programme-2022-2025-light-1.pdf
	Plan of action	FINGO operational plan/plan of action 2023 (in Finnish)	https://fingo.fi/wp-content/uploads/2023/01/Fingon-toimintasuunnitelma-2023.pdf
	Plan of action	FINGO operational plan/plan of action 2022 (in Finnish)	https://fingo.fi/wp-content/uploads/2022/02/Fingon-toimintasuunnitelma-2022.pdf
	Plan of action	FINGO operational plan/plan of action 2021 (in Finnish)	https://fingo.fi/wp-content/uploads/2021/06/FINAL-Toimintasuunnitelma_Fingo_2021.pdf
Spain	Strategy	SPAIN'S FEMINIST FOREIGN POLICY: Promoting Gender Equality in Spain's External Action	2021_02_POLITICA EXTERIOR FEMINISTA_ENG.pdf (exteriores.gob.es)
	Action plan	the Coordinadora's Gender Policy	https://coordinadoraongd.org/wp-content/uploads/2019/05/2019_Politica-Genero_Coordinadora_APROBAD A.pdf
	Strategy	Coordinadora - marco estratégico 2019-2022 (Strategic framework 2019-	https://coordinadoraongd.org/wp-content/uploads/2019/10/Marco-

		2022)	Estrategico-19-22_APROBADO.pdf
	Strategy	2021-2024 FOREIGN ACTION STRATEGY	https://www.lamoncloa.gob.es/consejodeministros/resumenes/Documentos/2021/270421-foreign_action_strategy_2021-2024.pdf
	Web article	Web article "A feminist foreign policy for Spain by Lourdes Romero	https://www.opendemocracy.net/en/can-europe-make-it/feminist-foreign-policy-spain/
	Web article	web article "Manuel Muñiz prepares with 'Mujeres Tech' the National Strategy for Technology and Global Order"	https://thediplotainSpain.com/en/2021/04/manuel-muniz-prepares-with-mujeres-tech-the-national-strategy-for-technology-and-global-order/
	Strategy	The Spanish Science, Technology and Innovation Strategy (EECTI), 2021-2027	https://www.ciencia.gob.es/InfoGeneralPortal/documento/1f4e85ac-9e50-49b4-a978-6c15a5195c88
Mexico	Web article	MEXICO'S FEMINIST FOREIGN POLICY	https://martha.org.mx/una-politica-con-causa/wp-content/uploads/2020/06/Mexico%E2%80%99s-Feminist-Foreign-Policy-1.pdf
	Action plan	The National Development Plan 2019-2024 (PLAN NACIONAL DE DESARROLLO 2019-2024)	https://www.dof.gob.mx/nota_detalle.php?codigo=5565599&fecha=12/07/2019#gsc.tab=0
	Strategy	PROGRAMA Especial de Ciencia, Tecnología e Innovación 2021-2024.	https://dof.gob.mx/nota_detalle.php?codigo=5639501&fecha=28/12/2021#gsc.tab=0
	Press release	Press release on "Mexico's feminist foreign policy, one of three best in the world"	https://www.gob.mx/sre/prensa/mexico-s-feminist-foreign-policy-one-of-three-best-in-the-world?idiom=en
	Web article	Web article on Checking In on Mexico's Feminist Foreign Policy Almost one year in, an ambitious set of norms has had mixed results. By Ann Deslandes, a freelance writer and researcher based in Mexico City, Foreign Policy	https://foreignpolicy.com/2020/12/30/mexico-feminist-foreign-policy-one-year-in/
	Web article	Web article "Feminist Foreign Policy: A Bridge Between the Global and Local by Daniela Philipson Garcia and Ana Velasco	https://www.yalejournal.org/publications/feminist-foreign-policy-a-bridge-between-the-global-and-local
	Strategy	Cinvestav, Código de Conducta, 2022	https://www.cinvestav.mx/Portals/0/sitedocs/integridad/CODIGO_DE_CONDUCTA_2022.pdf
	Strategy	PROGRAMA Institucional 2021-2024 del Centro de Investigación y de Estudios Avanzados del Instituto Politécnico Nacional	https://www.cinvestav.mx/Portals/0/sitedocs/dir/prog_inst_2021_2024_dof.pdf?ver=yFX4SMhLLjchRetuPifJaw%3d%3d
South Africa	Strategy	National Strategic Plan on Gender-Based Violence & Femicide	https://www.justice.gov.za/vg/gbv/NSP-GBVF-FINAL-DOC-04-05.pdf
	Annual report	GBVF Response Fund1 - Annual Report 2021-2022	https://gbvfresponsefund1.org/wp-content/uploads/2022/07/GBVF-Integrated-Annual-Report-072022.pdf

	Strategy	Framework on South Africa's National Interest and its Advancement in a Global Environment, 2022	https://www.dirco.gov.za/national-interest-framework-doc/
	Annual report	DIRCO Annual report, 2021-2022	https://www.gov.za/sites/default/files/gcis_document/202212/dirco-annualreport20212022reduced.pdf
	Annual report	DIRCO Annual report, 2021-2023	https://www.gov.za/sites/default/files/gcis_document/202212/dirco-annualreport20212022reduced.pdf
	Annual report	Department of Science and Innovation Annual Report 2021/2022	https://www.gov.za/sites/default/files/gcis_document/202210/dsi-annualreport-202122.pdf
	Web article	Web article: "South Africa's foreign policy: new paper sets the scene, but falls short on specifics by	South Africa's foreign policy: new paper sets the scene, but falls short on specifics (theconversation.com)

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