



# Diversity, Inclusion and Gender Equity

in the Forest Management and  
Fire Prevention Program in Brazil

A desk study in support of USFS  
International Programs initiatives in Brazil







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Fire Prevention Program in Brazil

Desk study

Organization



Partnership



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# LIST OF ABBREVIATIONS AND ACRONYMS

<b>COIN</b>	Fire Prevention and Suppression Coordination
<b>FUNAI</b>	National Indigenous Foundation
<b>Ibama</b>	Brazilian Institute for the Environment and Renewable Natural Resources
<b>ICMBio</b>	Chico Mendes Institute for Biodiversity Conservation
<b>IFM</b>	Integrated Fire Management
<b>Prevfogo/Ibama</b>	National Center for Wildfire Prevention and Suppression
<b>FIRE Program</b>	USAID/USFS South America Regional Fire Program
<b>RNBV</b>	National Volunteer Brigades Network
<b>TAF</b>	Physical Aptitude Test
<b>THUFA</b>	Test of Skills and Management of Agricultural Tools
<b>TI</b>	Indigenous Land
<b>UC</b>	Conservation Units (Protected Areas)
<b>USAID</b>	United States Agency for International Development
<b>USDA</b>	United States Department of Agriculture
<b>USFS-IP</b>	United States Forest Service - International Programs





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# PRESENTATION

The United States Forest Service (USFS), an agency of the United States Department of Agriculture (USDA), has a long-term relationship with the Government of Brazil providing technical assistance in the management and conservation of forests and natural resources. The USFS implements the **Forest Management and Fire Prevention Program in Brazil** in partnership with the U.S. Agency for International Development (USAID) and in collaboration with Brazilian government agencies and civil society organizations.

The Forest Management and Fire Prevention Program in Brazil operates within the scope of the Regional Fire Program in South America (FIRE) to strengthen integrated fire management as well as forest management to protect landscapes, conserve biodiversity, and improve local livelihoods in the Brazilian Amazon. In this and other programs, USFS International Programs - Brazil (USFS-IP Brazil), seeks gender and cultural diversity by recognizing the role and innovation that all people bring in preventing and suppressing wildfires and using natural resources sustainably, resulting in more alternatives for mitigating and adapting to climate change and, consequently, maintaining Brazilian socio-biodiversity.

In the Forest Management and Fire Prevention Program in Brazil, efforts to increase diversity, inclusion and gender equity currently focus on women, and are a cross-cutting effort in all three program components: **Integrated Fire Management; Governance and Forestry and Natural Resources Management;** and **Sustainable Use of Protected Areas.**

USFS-IP Brazil seeks to increase:

- Visibility, recognition and opportunities for women who work in integrated fire management, sustainable use of natural resources, forest-based value chains and public use of protected areas, including visitation and tourism.
- Number of women participating in training and qualifying courses and events in the thematic areas of the USFS-IP Brazil.
- Number of women occupying management, coordinating and supervisory positions in the thematic areas of the USFS-IP Brazil.
- Diversity and availability of proven training and hiring strategies, enabling women to work in the thematic areas and jobs to which they aspire.

For this to happen, it is necessary to understand women's role in integrated fire management and the management of natural resources in Brazil. This document stems from the strategies and actions of the **Forest Management and Fire Prevention Program in Brazil** and aims to **present the current status of the role, rate of participation, and empowerment level of women in integrated fire management (IFM).**

The information in this study intended for USFS-IP Brazil staff and Program partner organizations; however, the data and recommendations may be of interest to other stakeholders and organizations. We make it public in order to further strengthen the diversity and gender inclusion agenda in fire and natural resource management.

We invite you and your organization to contribute to this document and to this agenda through your comments, suggestions and experiences.

Enjoy your reading!

**Jayleen Vera**

Brazil Program Coordinator  
Fire Program Specialist, Latin America and the Caribbean  
United States Forest Service - International Programs



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## INTRODUCTION

Women make up more than half of Brazil's population and account for 47 million (~50%) of the labor market. Despite these numbers, women are still underrepresented in many sectors: they occupy 37% of leadership positions in private companies; only 15% and 13%, respectively, are federal Representatives and Senators; and only 12% of cities have women as mayors<sup>[1]</sup>. The fewer women there are in leadership positions and in politics, the lower the representation and scope of their interests and needs.

Coupled with that, men's wages are, on average 24% higher than women's who hold the same position. Furthermore, Brazilian women dedicate, on average, 10.4 hours/week more than men to household chores and caring for family members (for example, children and the elderly), a type of work characterized as "domestic" and unpaid. As a result, women dedicate less time to professional improvement relative to men<sup>[1]</sup>. The fewer women in mixed gender work teams, the less likely women are to excel in their roles and positions<sup>[2, 3]</sup>.



In Integrated Fire Management (IFM), women face similar challenges, whether in coordination roles or technical and operational ones<sup>[4-6]</sup>. In Brazil, specifically, Solis and colleagues identified that there are no regulations or guidelines that promote multiculturalism and gender equity in the processes of hiring forest fire brigades<sup>[4]</sup>. Although gender equity in IFM<sup>[4-7]</sup> is recognized, in Brazil this debate is still informal and poorly documented. Since 2019, Prevfogo/Ibama has released hiring calls for firefighters that include different standards for men and women in the Physical Aptitude Test (TAF) and in the Test of Skills and Management of Agricultural Tools (THUFA), seeking to increase gender diversity among contracted firefighters. It is still too early to assess the success of these measures in improving the representation of women in the brigades.

Gender equity means that women and men are treated fairly according to their respective needs. This may include equal treatment or treatment that is different but considers equivalent in terms of rights, benefits, obligations, and opportunities.

In the production, value chain and commercialization of Brazilian forest-based products, significant changes in cultural and productive relations have been documented<sup>[8-10]</sup>. Themes such as gender equality and equity and the representation of women in public and collective environments have gained greater visibility, and the main advances for this agenda include greater participation of women in decision-making for access and use of natural resources and in production and commercialization of agroforestry products. However, such advances do not apply to all Brazilian territories. Achievements, social ruptures and setbacks permeate the agenda of inclusion and representation of women in decision-making and governance of the use of natural resources in the Brazilian Amazon<sup>[9, 10]</sup>.

To support the debate and practice related to diversity, inclusion and gender equity in the Program, the USFS-IP Brazil has sought to understand

“In Brazil, specifically, Solis and colleagues identified that there are no regulations or guidelines that promote multiculturalism and gender equity in the processes of hiring forest fire brigades”



the best approaches to effectively ensure that interested and necessary people and organizations participate in this debate and have access to the information and reflections generated by the USFS-IP Brazil team. Although the Program covers IFM, governance and sustainable use of natural resources, this document focuses on the current landscape of equity and inclusion of women in fire management in Brazil.

This study aims to systematize and present the current situation of the role, participation and empowerment of women in integrated fire management in Brazil, with a focus on the Legal Amazon.

In the following pages, we present the objectives of the study that motivated the preparation of this document. Later, in the section on Women and Integrated Fire Management, we present the results obtained with the adopted methodology. We also present the implications of the main recommendations on how the Program can support the evaluation and improvement of its diversity, inclusion and gender equity strategies. Finally, we present suggestions that may influence other stakeholders and, perhaps, Brazilian public policies. The methods used in the study are presented in Appendices 1 and 2. **ALTHOUGH THE GENDER FOCUS OF THIS DOCUMENT IS ON WOMEN**, we acknowledge that gender diversity and equity can include gender identities other than female and male.



We strove to use inclusive language throughout in this document, and based ourselves on the booklet **Inclusive and Non-Sexist Language**, by GIZ. Access online: <https://jornalpredio3.files.wordpress.com/2021/03/cartilha-giz.pdf>



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## GOALS

### 2.1. Of the study

- I. Collect and systematize primary and secondary information on the role and participation of women in IFM.
- II. Identify challenges, barriers and opportunities for gender diversity, with a focus on women working in IFM.
- III. Formulate recommendations for how the Forest Management and Fire Prevention Program in Brazil can evaluate and improve its diversity, inclusion and gender equity strategies, with a focus on women.

### 2.2. Of this document

Systematize and present the current situation of the role, participation and empowerment of women in integrated fire management, with a focus on the Legal Amazon.





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## WOMEN AND INTEGRATED FIRE MANAGEMENT

There is consensus among the people interviewed that women bring different perspectives and knowledge to IFM approaches and strategies. Although recent, the increased visibility of women in IFM in Brazil<sup>[6]</sup> has shown that women have the physical capacity to successfully occupy any positions available in IFM and to perform all functions associated with preventing and fighting wildfires.

Based on the interviews, we identified the following qualities ascribed to women working in IFM, as well as the roles assigned to them:

- ◉ Women are organized in planning functions, administrative issues and documentation of monitoring reports and indicators.
- ◉ In the role of leaders, women fully understand operational aspects well and effectively address issues relating to the physical and emotional well-being of firefighters. For instance, they suggest and implement better alternatives for handling stress and options for rest during operations.
- ◉ Women are good at focus on the group rather than on the individual which benefits the well-being of brigade members and their families.
- ◉ Women have a vision of the whole and think about actions after the firefight; due attention is given to firefighters at different times.

However, **gender norms, representativeness** and **institutional and organizational factors** are the main challenges and barriers identified in the present study:

**Gender norms** include social and narrative constructions that predominate in most Brazilian cultures. For this study, gender norms focus on women (understood as persons who are biologically born female or who recognize themselves as female) and refer to any distinction, exclusion or restriction made based on gender that has the effect or objective of limiting women's individual and collective choices.

**Representation**, in this study, concerns the expression of women's interests and attainment of demands, as well as the fact that women are a minority in number in IFM.

**Institutional and organizational factors** are those related to the existing structures for hiring, training and operating the brigades contracted by Prevfogo/Ibama and ICMBio. Voluntary and community brigades, although essential in IFM in Brazil, were not the object of study for this document. Information about these brigades and women's role in them is covered in less depth.

**Limiting conditions** were identified that, in association with the main challenges and barriers for the inclusion and empowerment of women in IFM (Appendix 3), constrain the actions of USFS-IP Brazil and other organizations that seek greater gender diversity. The main limiting conditions are:

- IFM in Brazil still focuses strongly on fighting forest fires, thus emphasizing characteristics associated with men, such as strength and physical resistance, and undervaluing other IFM activities such as fire prevention, environmental education and the recovery of degraded areas, which rely on a broader range of skills and abilities.
- IFM in Brazil under-emphasizes prescribed burning activities, which do not require the same physical strength as forest-fire suppression activities, because in prescribed burns IFM agents do not need to carry firefighting equipment or travel long distances following the fire.

- There is a paucity of examples, and lack of dissemination of existing examples, of women working in the IFM who can inspire and motivate people seeking inclusion and gender equity.
- There is limited dialogue and understanding of cultural and biological gender differences.
- There is limited dialogue about awareness and actions to enable female empowerment and ensure women's safety in the context of sexual harassment during field work.
- There is a need for more safe spaces for dialogue and reflection on gender diversity.
- Fire brigades as institutions still do not respond to the demands of women broadly.
- Lack of data from monitoring and evaluation indicators to support the debate on quotas, differentiated tests, and other strategies that could facilitate the inclusion of more women in IFM.
  - Information on the number of women acting as brigade members in contracted, voluntary and community brigades is scattered; on the positions they occupy, it is decentralized and not easily accessible.
  - Even after training and testing, women constantly and continuously need to prove and defend their physical, technical and operational capabilities in IFM.

Below, we detail key findings on how gender norms, representativeness, and institutional and organizational factors affect the inclusion and empowerment of women in IFM in Brazil.

### **3.1. Gender norms**

We identified two main forms of discrimination against women that impede or undermine empowerment and the increase in the number of women in IFM. The first form of discrimination is associated with the perception that women do not have the physical and emotional capacity to fight wildfires. The second is associated with the sexual division of labor that prevails in Brazilian cultures. These two forms of discrimination are intrinsically related and amplify each other through feedbacks. For example, women are not prevented from participating in the selection, training and formation processes of the brigades. However, once selected, it is common to assign women desk functions and, when in the field, they are put in charge



of food preparation. Statements obtained in the semi-structured interviews illustrate such attitudes:

“The issue of forest fire has a very big deficiency, there is still a lot of machismo within the brigades (ES01-H-MIF-TEC).”

“I’ve heard complaints from firefighters, because we are women, they think we have to stay in the kitchen (ES05-M-MIF-GES).”

“I’m not going to take a woman to operations because she’s going to create extra work for me... because I’m going to have to have a bathroom for her, I’m going to have to have a camp for her, I’m going to have to have a shower for her (ES01-H-MIF-TEC; commenting on how state supervisors of fire brigades and brigade chiefs generally justify restricting women’s participation in field operations).”

Part of the discriminatory attitudes identified concern the power relations discussed in gender studies and which apply in IFM. For example, male performance is perceived as stronger and more resistant to work related to fighting wildfires, while female performance is seen as fragile and incapable. Phrases such as “she won’t be able to keep up / stay the course” (ES01-H-MIF-TEC) are perceived by the people interviewed as common opinions and discourses in the forest fire brigades. This dichotomous perception of masculine versus feminine, which assigns feminine characteristics only to women and masculine ones to men, has consequences also for the social acceptance of leaders in IFM, in which female competency to lead teams, particularly in firefighting, are questioned.



The differences related to sex in physical performance are explained, primarily by differences in the physiological and morphofunctional characteristics of men and women<sup>[11]</sup>. But these differences do not mean that women are unable to perform fire suppression roles. Physical preparation, age and emotional and physical health of people, both men and women, are indicators for good performance in IFM actions.

Discriminatory attitudes result, in part, in the reasons why women participate less in professional qualification processes. Consequently, women occupy fewer leadership roles. For example, in forest fire brigades, interviewees reported that leadership positions, such as supervisory roles, head of brigades and fire crew lead, are mostly occupied by men. This qualitative information is corroborated by data showing that, in 2019, of the 35 people who assumed leadership positions in the brigades contracted by Prevfogo/Ibama, 27 were men and 8 women (ES05-M-MIF-GES; personal communication, 25 October 2021).

The people interviewed also commented that discriminatory attitudes towards women in IFM are stronger among those who are older and have worked in the sector for a longer time. This suggests that, as new generations of firefighters join IFM, the likelihood of acceptance of women occupying positions and functions traditionally occupied by men will increase.

Some people interviewed commented that this scenario of discrimination against women in IFM also occurs in voluntary and, possibly, community brigades, but to a lesser extent. One factor associated with this reduced level of discrimination may be that these brigades are made up of people from, or closer to, urban areas, who generally have a higher level of education and are closer to the gender equity debate. This information is based on the perceptions of the people interviewed for the present study, and requires a systematic survey of the voluntary and community brigades to deepen the understanding of such perceptions.

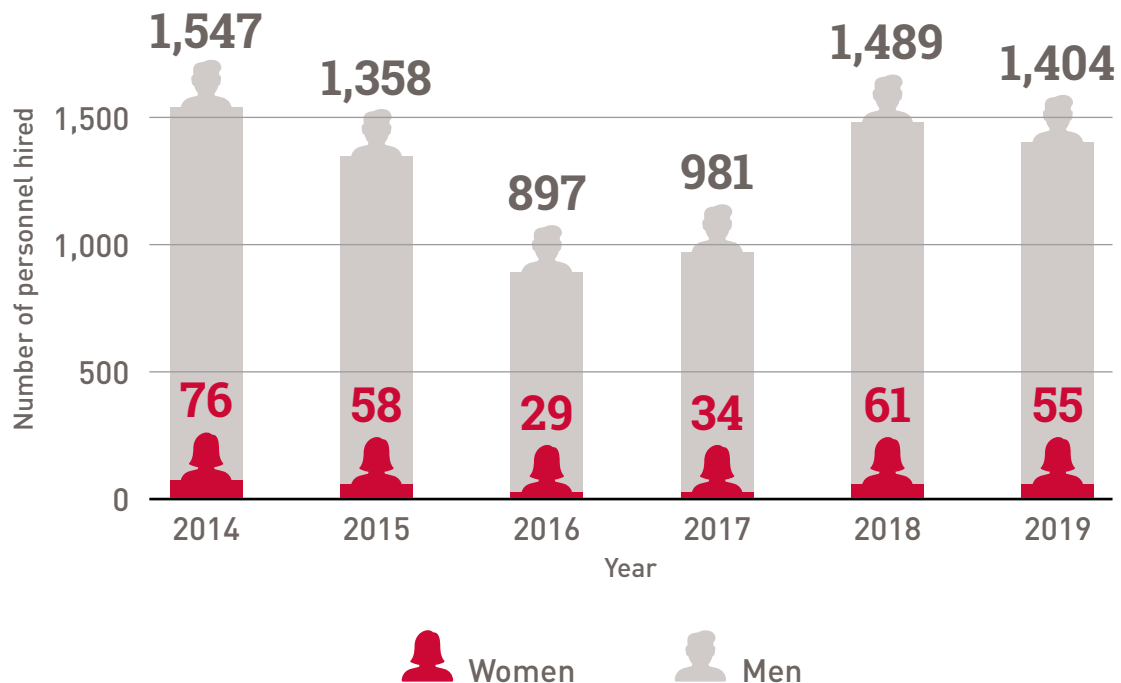
### 3.2. Gender representation

It was identified that, in integrated fire management in Brazil, women:

- Historically participate less in courses and training.
- Occupy fewer leadership positions, such as supervision and brigade leadership.
- Occupy fewer technical and field positions and are more in administrative management positions.

Data provided by agents from the Interagency and Fire Control Nucleus (NIQ) of the National Center for Wildfire Prevention and Suppression (Prevfogo) at the Brazilian Institute for the Environment and Renewable Natural Resources (Ibama) reveal that women are underrepresented in comparison to men among the Prevfogo/Ibama firefighters hired between 2014 and 2019 (Figure 1).

**Figure 1.** Number of brigade personnel hired in the period from 2014 to 2019 for the Prevfogo/Ibama Brigade Federal Program. Source: Personal communication, October 25, 2021; NIQ/Prevfogo.





This means that women represented, on average, only **4%** of Prevfogo/Ibama firefighters between 2014 and 2019 (Table 1). In 2019, among **35** Prevfogo/Ibama Supervisors, **27** were men and **8** were women and data from the same institution indicated that the **85** agents performing prescribed burns were **all men**

(Personal communication, November 9, 2021; NIQ/Prevfogo).

**Table 1.** Number of firefighters hired from 2014 to 2019 for the Prevfogo/Ibama Brigade Program.

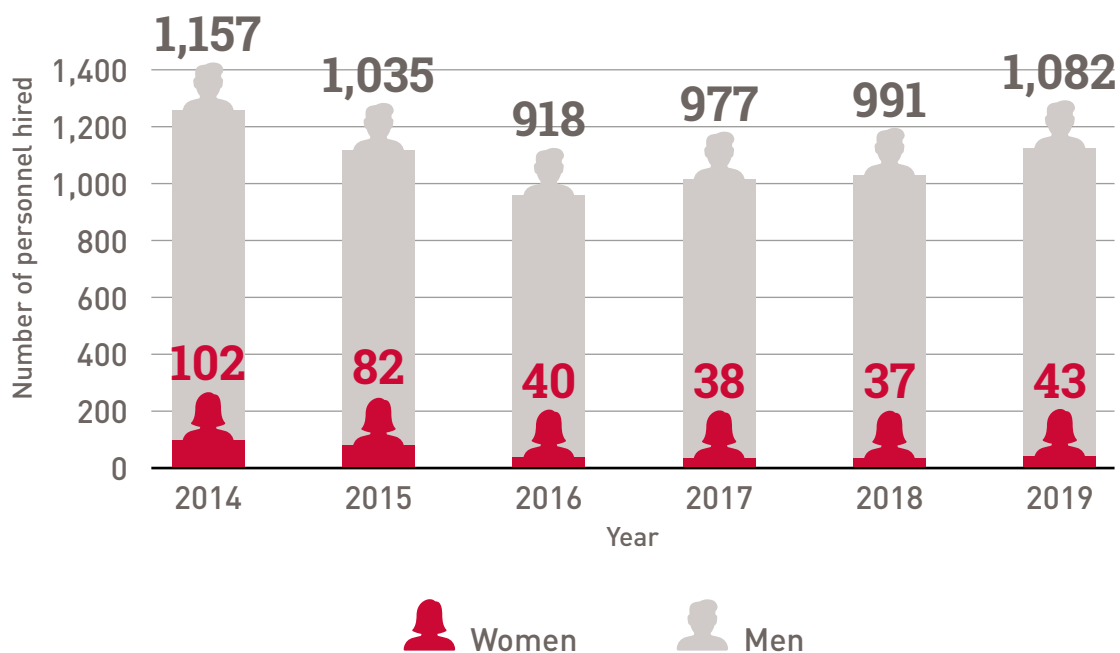
YEAR	Number of firefighters hired			Percentage	
	Women	Men	TOTAL	Women	Men
2014	76	1,547	1,547	5%	95%
2015	58	1,358	1,358	4%	96%
2016	29	897	897	3%	97%
2017	34	981	981	3%	97%
2018	61	1,489	1,489	4%	96%
2019	55	1,404	1,404	4%	96%

Source: Personal communication, October 25, 2021; NIQ/Prevfogo.

Interviews and informal conversations identified a growing demand from women interested in becoming firefighters, while for those who already are firefighters the demand is to occupy leadership, technical and operational positions and functions. However, there is no quantitative information on the number of women and men who apply for the positions, or the percentages of applicants of each gender who pass tests and/or are hired.

For the Chico Mendes Institute for Biodiversity Conservation (ICMBio), it was reported that the national brigade has 100 brigade members, of whom only 15 are women (personal communication, October 25, 2021; ICMBio). Among the people hired as temporary environmental agents (ATA) to work in federal conservation units as firefighters by ICMBio, the majority were men (Figure 2), and, as in Prevfogo/Ibama, women represented, on average, 5% (Table 2).

**Figure 2.** Number of people hired as temporary environmental agents (ATA) from 2014 to 2019 to work in federal conservation units. ATAs work in federal conservation units as firefighters. Source: Personnel communication, May 6, 2022; ICMBio.



**Table 2.** Quantitative number of people hired as temporary environmental agents from 2014 to 2019 to work in federal conservation units.

YEAR	Persons hired as temporary environmental agents (ATA)			Percentage	
	Women	Men	TOTAL	Women	Men
2014	102	1,157	1,259	8%	92%
2015	82	1,035	1,117	7%	93%
2016	40	918	958	4%	96%
2017	38	977	1,015	4%	96%
2018	37	991	1,028	4%	96%
2019	43	1,082	1,125	4%	96%

Source: Personal communication, May 6, 2022; ICMBio.

In the brigades contracted by Prevfogo/Ibama and by ICMBio’s Fire Prevention and Suppression Coordination (COIN), it was reported that women generally occupy food preparation functions and administrative positions. When performing fire prevention and firefighting functions, and in training, it was reported that women occupy functions that require less physical performance, such as using the rake. This is largely due to gender norms that define women as fragile and unable to handle heavy work in the field. But it also reflects power relations in which women, because they are in smaller numbers in the brigades, have difficulty expressing their interests and achieving their aspirations. The citations obtained in the semi-structured interviews exemplify the intersection of gender norms and representativeness that interfere in the empowerment processes of women in IFM.

“As long as you have more men than women working mainly in leadership positions, they will tend to put more men than women”  
(ES01-H-MIF-TEC).

“Then, for example, at the time of opening firebreaks in my training, the coordinators put the women to work in raking. The rake is the last tool in the line of combat and considered the easiest function within the squadron”  
(ES02-M-MIF-TEC).

“She says she only understands about raking. She took some training in other areas, but for the sake of comfort within the team, maybe they wouldn't give her the opportunity to try the blower or chainsaw and take on other roles within the group; but this was never put forward even by the team chief. She, when questioning this repeatedly, said that she spoke and was not heard. So, she didn't insist too much because she didn't have anyone to defend her within her group, totally comprised of males”  
(ES02-M-MIF-TEC).

“As soon as I got there, the first thing she told me was that she couldn't go to level 3 operations, because the boys wouldn't let her, and they were always prejudiced against her going. She said that when she went to these arguments, they tried their best to put her to take over the kitchen duties, and that bothered her a lot. She underwent the same selection process as men, so there was no reason for her to be treated differently, because physically speaking, she was in much better condition than many of the boys”  
(ES02-M-MIF-TEC).



In informal conversations with female brigade members, it was reported that because they are minorities in their brigades, they feel ignored, vulnerable and insecure. It was also reported that female brigade members, because they occupy more administrative positions or have lower operational performance, need to prove at all times that they are capable. They need to assume masculine stereotypes (e.g., being tough) and they need to be **warriors**. These processes of affirmation of women in masculine environments, even if unintentionally, create conditions that affect people's well-being and mental health. In IFM, it is an assumed requirement for any person involved to be physically and mentally well so as not to put themselves, other brigade members and the entire operation at risk.

### **Warrior Syndrome in Fire Management**

It was reported in the interviews that women look for a physical performance that is beyond their capacity, going beyond their limits to show that they are capable of performing any task, avoiding demonstrating that the task is heavy or difficult to perform. The reason: if they comment on something, other people can say things like "you see, I said you couldn't handle it", or "you're slowing down the group." For women, to demonstrate that at some point the work became difficult, or that they are tired, is to demonstrate that these other people are right and that they should not be in the field, since, in fact, all people who work with fire management have their physical and mental limits that must be respected.

One example cited was that women use strategies that have the potential to harm their emotional and physical health, such as using medication to prevent menstruation when they are in combat or assuming masculine positions to be accepted in the predominantly male group (ES02-M- MIF-TEC).

“We predict that this can happen, in speeches and dialogues there is a great desire on the part of women to occupy certain spaces at any price”  
(ES05-M-MIF-GES).

The warrior syndrome is not unique to women. Among firefighters, men also go beyond their physical and mental limits to establish themselves as heroes, a common stereotype in large-scale firefighting activities.

Still in terms of representativeness, historically, women participate less in capacity building and training in IFM skills before and after being hired as a firefighter. Part of the reason for this, identified in the interviews and literature review, is that women have fewer hours of dedication to professional growth, as they dedicate more time than men to household chores.

### **3.3. Institutional and organizational factors**

The study identified that the low representation of women in IFM in Brazil may also be related to institutional and organizational factors that guide the hiring, training and operation of contracted brigades from Prevfogo/Ibama and ICMBio (see Appendix 4 for details on the contracting process). Based on the interviews, it was found that the two federal agencies, Ibama and ICMBio, did not have, at the time of the interviews, specific institutional policies, strategies or plans for gender equity in IFM. “Internally, it is not even at Prevfogo, I would say at Ibama it does not seem that there is anything structured in this sense, as a discussion, or on paper... in short, not only in the issue of fire, but in the institution as a whole” (ES05-M-MIF-GES).

However, in these two federal agencies, and specifically in the coordination departments and technical centers linked to IFM, there are specific actions and internal and external debates on the inclusion and increase in the number of women firefighters assuming different functions. The external debate includes partner organizations, academia and thematic groups created from technical and research events.

Examples of debates and actions include:

- Internal surveys show that women are fewer and occupy more administrative than technical, operational and leadership spaces, as well as the understanding that having more women in different roles and functions results in improvements for the IFM system as a whole.
- Adaptation of the Prevfogo/Ibama brigade uniform for the well-being and safety of women:
  - Prevfogo/Ibama adapted the catalog of all pieces of personal protective equipment for women: whenever the institution orders new uniforms they are fitted differently for men and women. Women’s pants, for example, are more comfortable for the firefighter and it was reported in the interviews that they reduce problems with urinary tract infection, as they have a cut that better suits the female anatomy. This change

is a result of the visibility of women's needs and demands and the recognition of differences in anatomies.

- Adaptation of the process of selection and hiring of brigade members:
  - ICMBio adopted the hiring of firefighters for a period of 3 years, in the form of temporary 2-year contracts with extension for another 12 months. This creates a more favorable background for women to invest effort and time in preparing for the ICMBio brigade selection process.
- Adaptations in the selection process of brigade members due to the Covid-19 pandemic, such as hiring on the basis of a candidate's curriculum (see more in Appendix 4) could be incorporated in future hiring processes. Inclusion of the curriculum analysis in the ICMBio fire brigade selection process resulted in an increase in the diversity of the fire brigade profile. Along with general performance analysis, results beyond physical tests were considered.
- The debate on quotas for women and adaptation of physical tests in the selection and hiring processes of firefighters from Prevfogo/Ibama and ICMBio; this is an ongoing debate with opposing views on the effectiveness and acceptance of these types of strategies for gender inclusion.

**Two controversial points** were identified in the debate related to the brigade selection process and the organizational structure of the Prevfogo/Ibama and ICMBio brigades (see more details about brigades in Appendix 4):

- I. Whether or not to implement quota-based strategies for women in the Prevfogo/Ibama and ICMBio public notices; and
- II. Whether or not to modify the Physical Aptitude Test (TAF) and the Test on Skills and Management of Agricultural Tools (THUFA), considering a lower weight-carrying requirement for women in the TAF and allowing more time for women to complete the THUFA.



The TAF consists of a person walking for 2,400 meters carrying a backpack pump filled with water, weighing approximately 24 kg. Currently, at Prevfogo/Ibama the time to complete the test is differentiated for men and women, and the time may vary state by state. In general, women have more time to complete the test. This is a recent policy, put in place in 2019. THUFA consists of a person cutting grass and raking an area of 3 by 5 meters, in a time that can also vary by state. In general, between 20 and 25 minutes are

allowed for the area to be completely cleared of vegetation, according to the practice of clearing down to the “mineral soil”. There is no difference in the test run time for men and women.

The issue of the quota for women and the differentiation between biological sexes and gender for the TAF and THUFA tests are topics that generate disagreement between firefighters, departments and interested parties. This study identified the need for more information and examples of how other countries have addressed differentiated tests. To support the debate, positive and negative aspects identified during interviews and informal conversations are presented (Chart 1).

## Chart 1

Survey of opinions on the positive and negative aspects of the differentiation of physical tests and the quota system for women as strategies for the inclusion of women in fire management in Brazil.

Strategy for the inclusion of women	 Positive aspects	 Negative aspects
<b>Quota system</b>	<ul style="list-style-type: none"> <li>• Increase in the number of female brigade members;</li> <li>• Ability to identify the number of women interested in becoming firefighters;</li> <li>• Having a greater number of women in field operations will provide greater physical security and lower the likelihood of sexual harassment for women;</li> <li>• Greater representation of women in leadership positions in the brigades.</li> </ul>	<ul style="list-style-type: none"> <li>• Environment that discredits women’s ability to compete;</li> <li>• Discrimination against women who enter through the quota system;</li> <li>• Meeting the needs of women at the expense of other minority groups; and</li> <li>• Partial and discriminatory solution for gender equity.</li> </ul>
<b>Differentiation in physical tests</b>	<ul style="list-style-type: none"> <li>• Encouragement for women to participate in the selection processes of the Prevfogo/Ibama and ICMBio brigades; and</li> <li>• Greater opportunities for women who have less time to dedicate themselves to the physical preparation needed to develop brigade roles.</li> </ul> <p><b>Justification:</b> Fairer and more stable conditions for women to dedicate time and energy to competitive selection processes based on physical aspects.</p>	<ul style="list-style-type: none"> <li>• Environment of distrust of the physical abilities of the firefighters; and</li> <li>• Risks for teams and operation in situations where brigade members need to be carried away evacuated from combat areas.</li> </ul> <p><b>Justification:</b> The physical tests are feasible for all people, regardless of biological sex, who have the skills and physical preparation to carry out all the brigade functions required for the IFM.</p>

Source: Study information.





The following quotes, gathered from interviews and informal conversations, exemplify how the low representation of women in IFM in Brazil may be related to Prevfogo/Ibama and ICMBio hiring processes:

“When she reads the notice and sees the processes of the physical aptitude test and the test of skills and management of agricultural tools, she knows that she will compete exclusively with men, I believe that it is indeed a factor that limits them [women] to compete”  
(ES04-H-MIF-TEC).

“We don't even let the woman participate in the training process, we bar her right at the beginning, with the physical tests. We are losing other capabilities for IFM without knowing the people with those capabilities”  
(CI01-M-MIF-TEC)\*.

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\* These two tests are used as a first elimination round for candidates to firefighter positions. Candidates who pass the TAF and THUFA tests, can go on to receive training for hiring into the Prevfogo/Ibama brigades. However, after training, not all candidates are hired, since openings are limited. In some cases, there is a curriculum analysis, in which a candidate can earn points for having worked as a firefighter in the previous 4 years.



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## RECOMMENDATIONS FOR THE PROGRAM

### 4.1. A changing scenario

The Regional FIRE and Forest Management and Fire Prevention in Brazil Programs are being implemented in a context of active transition in IFM. This creates important opportunities for collaboration between USFS-IP Brazil, Prevfogo/Ibama and ICMBio on the issue of diversity and gender equity. This transition scenario is already reflected in the planning and execution of activities to integrate cultural and gender diversity. For example, in the Interagency and Fire Control Center of Prevfogo/Ibama, in the interface actions with traditional and rural communities, there is an initiative called 'Surveying Traditional Knowledge about the Use of Fire'. This effort seeks to recover traditional knowledge of the use of fire specifically with women; to discuss when and how the use of fire becomes harmful; and to apply non-authoritarian ways of controlling fire, such as managing the land without the use of fire; and to involve indigenous, quilombolas (Afro-descendants) and rural settlement women in IFM.

Ibama, as an institution, does not have a formal plan focused on gender diversity and inclusion. However, internally at Prevfogo/Ibama, these issues have been addressed for several years. For example, since 2019 the Center has

included activities with indigenous women in its planning and has discussed and implemented recruitment processes with differential requirements for men and women in TAF/THUFA. This planning with a focus on gender issues started at Prevfogo/Ibama even before the 7th International Conference on Forest Fires (Wildfire) in 2019, during which women who work with IFM created the MULHERWildFire2019, a network for women to stay connected and continue discussing and advancing these issues.

At ICMBio, the view that brigades require professionals able to perform multiple tasks promotes the inclusion of women, because characteristics related to social functions (care, individual and collective well-being) are now valued as well as physical characteristics.

Interviewees also reported that indigenous culture is changing, such that women have assumed more visible roles. This change has happened naturally, as an internal initiative of indigenous women and people from their villages. Women no longer face insurmountable barriers to becoming leaders and firefighters in some indigenous cultures.

The advances in the IFM agenda are due to the work of different sectors and strategies, such as research, government, communities, and international cooperation. Joint actions were identified between these sectors that have facilitated the insertion and deepening of the debate on gender and cultural diversity, including actions implemented by the Forest Management and Fire Prevention Program in Brazil. For example, the partnership with USFS has moved Ibama and ICMBio internally to choose participants for extension and training events. “The fact that the partner said that there had to be 50% women to fill the vacancies offered forced Prevfogo/Ibama to react. Normally, they would call people who have knowledge and worked on the subject and maybe not give opportunities to women, who have no visibility on the issues in question, because they are currently so few” (ES06-M-MIF-GES).

### **Other changes aimed at cultural diversity**

In the draft bill of the National Policy on Integrated Fire Management (under discussion in the Federal Senate) proponents were able to include aspects of the traditional use of fire, to avoid criminalizing cultural and productive practices that rely on fire. The autonomy of indigenous communities to use fire in the agricultural plots, rituals, and in prescribed burning and black firebreaks\*\* is being recognized. In general, indigenous communities have responded to the new reality of debates on and adaptation to climate change, which alter their own traditional use of fire.

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\*\* Controlled burning technique of organic material to prevent the spread of flames, have been used efficiently to prevent forest fires.

The formation of federal and volunteer indigenous brigades in indigenous territories is also an opportunity for more effective fire prevention and firefighting strategies in these territories. It was identified that indigenous women have a fundamental role as interlocutors between indigenous firefighters and the local population. As firefighters and environmental educators, women have the sensitivity to dialogue with the communities and explain the role of brigades, prescribed burning and fire suppression operations.



## 4.2. Opportunities

Considering the objectives and scope of the Program's activities and the changes and debates on gender already underway in Brazil, actions recommended in three areas of intervention that bring together key themes and actions for diversity, inclusion and gender equity are presented below.



# Axis 1.

## Increase visibility and empowerment

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### **Maintain and strengthen actions that give visibility to the importance of the role, interests and demands of women working in IFM**

#### *Possible activities:*

- Promote informative and awareness-raising events.
- Promote internal and external communication campaigns.
- Prepare various materials (videos, newsletters, infographics) for internal and external communication.
- Raise awareness of partner organizations on approaches and strategies that USFS-IP Brazil adopts in its programs and initiatives.



### **Empower women through the expansion of experiences, content and information**

#### *Possible activities:*

- Promote inspiring references from other women working in fire management.
- Provide women who work in fire management with information from the program's monitoring system.
- Promote meetings to exchange experiences with a focus on the role and participation of women.



### **Support project initiatives by partner organizations that include budget line items to hire professionals with a part-or or full-time focus on diversity and gender**

# Axis 2.

## Promote training and continuing education



### Promote qualification, training and leadership courses for women

#### *Possible activities:*

- Foster women-led events for female participants.
- Foster women-led events for mixed groups.
- Foster events focused on women from indigenous, quilombolas (Afro-descendants) and rural settlement communities.



### Promote the training of new IFM leaders and instructors

#### *Possible activities:*

- Promote specific courses for leadership positions within IFM.
- Coordinate instructor-training courses with Prevfogo/Ibama and ICMBio.
- Promote training in IFM for FUNAI staff.



### Include themes of diversity, inclusion and gender equity in training events

#### *Possible activities:*

- Present information on women and fire management, their challenges and demands whenever possible at USFS events. If possible, invite firefighters and other role models to contribute with informative and thoughtful presentations.
- Coordinate the inclusion of modules on these themes in training courses offered by IBAMA and ICMBio.
- Develop videos (animations, others) to be included in presentations and modules.

# Axis 3.

## Strengthen networks of dialogue and exchanges of experiences

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### Strengthen existing articulation networks

#### *Possible activities:*

- Support the National Volunteer Brigades Network (RNBV) with surveys of information on gender in its affiliate brigades.
- Participate in groups, such as #MULHERWildfire2019, to understand changes and new demands from women in fire management.
- Coordinate purposeful meetings of collectives and networks that discuss diversity and gender.



### Articulate mentoring processes

#### *Possible activities:*

- Coordinate with RNBV, Prevfogo/Ibama (environmental education department) and ICMBio to implement meetings and other more complex forms of mentoring between inspiring role models and contracted and voluntary and community brigade members, focusing on women from indigenous, quilombolas territories and rural settlement communities.



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## FINAL CONSIDERATIONS

The U.S. Forest Service believes that diversity in gender, cultures, knowledge, geographies and institutions is a viable and necessary pathway to the protection and sustainable use of natural resources. USFS-IP Brazil, through the Forest Management and Fire Prevention Program in Brazil, will continue and expand its efforts to include women in integrated fire management, in the sustainable use of natural resources and in Amazonian biodiversity value chains. These efforts can only be implemented and expanded with cooperation among institutions, in partnership with government, organized civil society, and traditional communities.

We seek to implement these three initiatives recommended in this technical study:

**Axis 1.**  
**Increase the visibility and empowerment of women**

**Axis 2.**  
**Promote training and continuing education**

**Axis 3.**  
**Strengthen networks of dialogue and exchange of experiences**



Expected results from implementation include, but are not limited to:

- Visibility, recognition and greater opportunities for women;
- Greater number of women participating in courses, qualifications and training events;
- Greater number of women occupying management, coordination and supervisory positions;
- Greater number of women serving as role models and inspiration for other women;
- Women, young and old, working wherever they want.



Be part of this process. If you and your organization would like to **contribute to the diversity, inclusion and gender equity efforts**, please send an email with the subject: Gender Equity to **[usfs.brazil@gmail.com](mailto:usfs.brazil@gmail.com)**



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# APPENDICES

## Appendix 1. Study methodology.

A combination of primary and secondary information collection methodologies and techniques was adopted (Figure A-1).

This methodological approach allows the collection of multiple sources of information (or evidence), which supported the formulation of “converging lines of investigation,”<sup>[12]</sup> a common tactic in social qualitative research that seeks to evidence findings in a more convincing and accurate way, thus increasing the quality of the analysis and validity of the information obtained<sup>[13]</sup>.

**Figure A-1.** Synthesis of the methodological approach applied to obtain information that supported the preparation of the study.



LITERATURE  
REVIEW



INTERVIEWS



QUESTIONNAIRE



DOCUMENT  
ANALYSIS



INFORMAL  
TALKS

First, a theoretical analysis was carried out based on existing literature on topics relate to gender, forest resources and integrated fire management, with emphasis on the Brazilian context. Then, based on this preliminary theoretical analysis, primary information was collected from semi-structured interviews, online questionnaires and informal talks<sup>[14]</sup>. There were also analyzes of documents provided or mentioned by the people interviewed. Semi-structured interviews and online questionnaires were the main sources of primary information. For this reason, a detailed description of the application and metrics of the interviews and online questionnaires is presented below.

### ***Semi-structured interviews***

From October 6 to December 2, 2021, 17 people were interviewed representing 11 organizations from the sectors: government, civil society organization (CSO) and academia. The complete list of organizations represented in the interviews can be found in Table A-1.

**Table A-1.** List of organizations represented in the semi-structured interviews.

<b>Sector</b>	<b>Organization</b>
<b>Government</b>	FUNAI - National Indigenous Foundation • Territorial Protection Directorate
	Ibama - Brazilian Institute for the Environment and Natural Renewable Resources • NIQ - Center for Interagency and Fire Control of the National Center for the Prevention and Combat of Forest Fires
	ICMBio - Chico Mendes Institute for Biodiversity Conservation • COIN - Fire Prevention and Suppression Coordination
	USFS - United States Forest Service • International Programs Brazil • International Programs Peru
<b>Non-governmental organization</b>	Xerente Federal Fire Brigade and Association of Xerente Indigenous Firefighters (ABIX)
	Xerente Women's Volunteer Fire Brigade and Xerente Indigenous Brigade Association (ABIX)
	OPAN - Operation Amazônia Nativa
	IEB - International Institute of Education of Brazil
	PPA - Partners for the Amazon Platform
<b>Research</b>	Cemaden - National Center for Monitoring and Alerts for Natural Disasters, linked to the Ministry of Science, Technology and Innovation and MAP-Fire Project ( <a href="http://www.treeslab.org/map-fire.html">http://www.treeslab.org/map-fire.html</a> )

In Table A-2 there are the labels used in the direct citations.

**Table A-2.** List of interviews and labels used for identification.

#	Interview identification	Conversation date (DD.MM.YY)
1	ES01-H-MIF-TEC	06.10.21
2	ES02-M-MIF-TEC	13.10.21
3	ES03-M-USO-GES	19.10.21
4	ES04-H-MIF-TEC	22.10.21
5	ES05-M-MIF-GES	25.10.21
6	ES06-M-MIF-GES	29.10.21
7	ES07-M-MIF-GES	02.11.21
8	ES08-M-MIF-GES	06.11.21
9	ES09-M-CdV-GES	09.11.21
10	ES10-H&M-MIF-GES	09.11.21
10	ES10-H&M-MIF-GES	09.11.21
10	ES10-H&M-MIF-GES	09.11.21
11	ES11-M-MIF-TEC	11.11.21
12	ES12-M-MIF-PES	19.11.21
13	ES13-H-CdV&MIF-GES	01.12.21
14	ES14-M-CdV-GES	02.12.21

**List of abbreviations of labels used:**

- CdV** Value Chains
- GES** Management
- ES** Semi-structured interview
- H** Men
- M** Woman
- MIF** Integrated Fire Management
- PES** Research
- TEC** Technical
- USO** Public Use

**Examples of labels used**

**ES01-H-MIF-TEC** Semi-structured interview - Order in the list of interviews - Man - Integrated Fire Management - Technical performance

**ES12-M-MIF-PES** Semi-structured interview - Order in the list of interviews - Woman - Integrated Fire Management - Research activities



Among the 17 people interviewed, 11 were women and 6 men, of whom 6 were representatives of government organizations, such as Ibama, specifically Prevfogo/Ibama, and the Chico Mendes Institute for Biodiversity Conservation - ICMBio, specifically the Fire Prevention and Suppression Coordination - COIN. The major federal IFM programs in Brazil are managed under these agencies<sup>[4]</sup> and, together with the National Indigenous Foundation - FUNAI, they are the main government partners of the USFS in the Forest Management and Fire Prevention Program.

A semi-structured interview approach<sup>[15]</sup> was adopted, based on a pre-defined script to guide the interviews (Appendix 2) but allowing the people interviewed to freely elaborate on their ideas<sup>[13]</sup>. With the interview script, we sought to obtain the following information:

- General data of the person interviewed and the organization represented;
- Performance and overview of the work developed, exploring connections with cultural and gender diversity;
- Perceptions about challenges and limiting conditions for gender inclusion, with a focus on women, in the IFM;
- Perceptions of opportunities and enabling conditions for gender inclusion, with a focus on women, in the IFM;
- Identification of organizations that can leverage the opportunities listed; and
- Short and long-term actions to increase women's engagement and participation in the IFM.

The interviews were performed via online platforms and calls, with an average duration of 1h15min, the shortest interview being 55min and the longest 1h45min; the interviews were recorded with the permission of the people interviewed.

### ***Questionnaires***

Primary information was obtained from 17 questionnaires applied<sup>\*\*\*</sup>, before and after, to 9 different online events of the Program. These questionnaires were applied through an online form to participants of events that addressed forest fire prevention and suppression topics, including

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<sup>\*\*\*</sup> The questionnaires are part of the efforts of the Forest Management and Fire Prevention Program in Brazil, in conjunction with the Regional Fire Program, to monitor the impacts of the two programs (Brazilian and regional) on their strategies and actions for diversity and gender equity.



technical courses, leadership training and scientific events, all related to the IFM.

The questionnaires were applied from 11/29/2021 to 04/21/2022, through the online tool 'Google Forms', which generated a hyperlink sent by email to the people selected to participate in the events. People received two questionnaires, the first 3 to 5 days before the start of the event and the second, 5 days after the end date of the event. Participation was voluntary and the responses were stored in Excel® spreadsheets and differentiated by application date and type of event (Table A-3).

**Table A-3.** List of events where online questionnaires were applied.

<b>Type of questionnaire applied</b>	<b>Event Date</b>	<b>Event name and date</b>
Pre- and post-event participation survey	30-Nov to 3-Dec. 2021	IX Congress of Ecology and Fire Management
Post-event participation survey	16 to 18-Nov. 2021	S-190 Course: Introduction to Fire Behavior for Forest Fires
Pre-event participation survey	14 and 15-Dec. 2021	FI-110 Course - Forest fire observation and source scene protection for first responders
Post-event participation survey	Weeks 8-12- Nov, 22-26-Nov and 6-10-Dec. 2021	Virtual Leadership Workshop Women of the Americas and the Caribbean in the control of fire
Pre- and post-event participation survey	12 to 14-Jan. 2022	S-190 Course: Introduction to Fire Behavior for Forest Fires (Dedicated to Women)
Pre- and post-event participation survey	19 and 20-Jan. 2022	FI-110: Forest Fire Observation and source scene protection for first responders (Dedicated to Women)
Pre- and post-event participation survey	09 to 11-Feb. 2022	S-190 Course: Introduction to Fire Behavior for Forest Fires
Pre- and post-event participation survey	23 and 24-Feb. 2022	FI-110 Course: Forest Fire Observation and Origin Scene Protection for First and First Responders
Pre- and post-event participation survey	7 and 8-Apr. 2022	SCI-100 Introduction to the Incident Command System
Pre- and post-event participation survey	18 and 19-Apr. 2022	SCI-100 Introduction to the Incident Command System

In total, **216** responses to the pre-event questionnaires and **82** responses to the post-event questionnaires were obtained. Among the people who answered both types of questionnaires, the majority represented government organizations, such as Prevfogo/Ibama and ICMBio, followed by representatives of CSOs and traditional communities, mainly indigenous. Of those who answered the pre-event questionnaires, **133** were women, **83** men and **1** non-binary person. Most were contracted and volunteer brigade members (**61 of 216 responses**), followed by respondents who held coordinating or leadership positions and functions in the brigades (**38 of 216 responses**). With both types of questionnaires, we sought to obtain information:

- The person gender identity, position, time and type of organization of work;
- Motivations and challenges to participate in the event;
- Suggestions to facilitate the preparation and participation in the event;
- Possible benefits for participating in the event; and
- Forms of application of the lessons learned from the event.



See infographic '**Systematization of responses to questionnaires on motivations and challenges for participating in events promoted under the Forest Management and Fire Prevention Program in Brazil**' at the end of this document.

## ***Analysis***

### ***Interviews and Questionnaires***

The semi-structured interviews were transcribed into Microsoft Word® documents and the responses obtained from the online questionnaires were systematized in Microsoft Excel® spreadsheets. The information obtained from the interviews and questionnaires was coded using classical content analysis<sup>[16]</sup>. First, the analysis involved coding the transcripts and questionnaire responses in a deductive way to identify codes related to the role, participation and empowerment of women in IFM. Then, similar codes were grouped into themes: gender norms, representativeness and institutional and organizational factors. Using this approach, we also identified opportunities to advance the Program's diversity, inclusion and

gender equity agenda. The interviews were labeled in the following sequence: type of data collection (e.g., semi-structured interview), sequential order in which people were interviewed, gender identity, type of main role in the IFM.

### ***Documentary analysis***

Several documents related to IFM in Brazil were analyzed, including digital files and information available on websites. The documents analyzed included the National Policy for Integrated Fire Management (Bill No. 1 1,276/2018 , approved by the House of Representatives, pending in the Senate); public notices for the selection process to fill vacancies for firefighters, squadron chief and brigade chief to act in the prevention and combat of forest fires at Prevfogo/Ibama and ICMBio; academic articles and presentations at technical and academic events; and reports from women firefighters in national and international newsletters. Documents related to the governance and use of natural resources in the Brazilian Amazon were also analyzed, such as the report “Equality between men and women in sustainable production activities projects supported by the Amazon Fund/ BNDES <sup>[9]</sup>”, among others.



## Appendix 2. Semi-structured interview script

Responsible: Ana L. V. Espada	Date: / /	Place:
<b>BLOCK 1 - INTRODUCTION AND CONSENT</b>		
<b><i>Purpose of the interview</i></b> Gather information and perceptions of various players related to the Brazilian forest sector, particularly in the Amazon, for the elaboration of a study and survey of indicators on the participation and empowerment of women in the integrated management of fire.		
<b><i>Time required</i></b> Estimated at 1 hour and 30 minutes.		
<b><i>Participation</i></b> Your participation is voluntary and there is no penalty for not participating. You don't have to answer questions you don't want. We believe there is no risk to you in answering the interview questions and there are no direct benefits or compensation for you.		
<b><i>Confidentiality</i></b> Your identity and the information you provide are confidential to the extent permitted by law. Your name will not be associated with any response and will not be used in any public document or publication unless you authorize it in advance. Your answers will be presented after systematization and combination with the answers of other respondents. Possibly, direct quotes and paraphrases from your interview can be used in reports, publications and scientific articles. We will endeavor to keep your identity confidential. If you agree, your interview will be recorded in video and/or audio format. The audio will be transcribed and then securely archived, only a few representatives of the USFS Team Brazil will have access to these videos and audios.		
<b><i>Right to terminate participation</i></b> You have the right to terminate your participation in the interview at any time without any consequences.		

### **BLOCK 2 - GENERAL DATA ABOUT THE RESPONDENT AND ORGANIZATION**

1. Name:	
2. Organization:	
3. Position:	4. How long have you worked in the organization:
5. Contacts:	6. Territory/Region you work:
7. Activity (briefly on what the organization does):	

### **BLOCK 3 - OPERATION AND OVERVIEW**

8. Overview of the work you are doing exploring links with gender and cultural diversity.

### **BLOCK 4 - SWOT ADAPTATION**

*Explore implicit elements of the conversation in the questions below:  
INTERESTS; POWER OF INFLUENCE AND ABILITY TO ACTION/WILL TO SOLVE*

9. What are the challenges to including women in activities (fire brigades, IFM)?

10. What are the three main difficulties/weaknesses of the system [detail according to activity] [e.g., Prevfogo/Ibama, ICMBio, voluntary and community brigades] in the geography in question [mention biome or region] that potentiate these challenges?

11. What are the opportunities to include women in activities?

12. What are the three key enablers/strengths of the system that leverage these opportunities?

13. Ideally, which organizations should be and how should they act to maximize these opportunities?

14. What are the short-term and long-term actions to increase the engagement and participation of young and adult women in activities [interview focus]?

General notes [point out agendas and actions according to the interviewee's profile].





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### **Appendix 3. Key challenges and barriers to women's inclusion and empowerment**

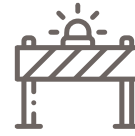
The main challenges for the inclusion and empowerment of women in the IFM scenario in Brazil involve institutional and organizational structure. There is a consensus among the people interviewed that the greater inclusion of women must be accompanied by changes that welcome these people, thus avoiding: 1) overwhelm these women, and 2) create environments of dispute between men and women. The main barriers identified include gender norms. Part of the barriers to be overcome by women and society go beyond the IFM context.

Below, we summarize of the main challenges and barriers identified for the inclusion and empowerment of women in the scenario of integrated fire management in Brazil.



## Main challenges

- Lack of internal diversity, inclusion and gender equity strategies and policies:
  - Lack of incentive plans for the inclusion and participation of women.
  - Lack of dialogue and reflection on the topic with all the necessary people, including those from federal centers and coordination departments, state supervisions and local leaders.
  - Lack of common understanding between public agencies and other actors on the need for quotas for women and differentiated tests in the calls for bids for hiring brigades.
- Less participation of women in training and fewer leadership positions.
- Lack of resources to encourage and sustain initiatives that involve women's inclusion:
  - For example, equipping voluntary and/or community brigades formed by women's collectives.
  - Provide minimum care structure for volunteer and/or community brigade, such as PPE and life insurance.
- Lack of public-private partnerships to provide technical and financial support to the brigades.



## Main barriers

- Gender norms and sexual division of labor:
  - Women face discouraging, discrediting and judgmental speeches coming from men and women, both family and co-workers.
  - Women go through the same selection processes as men, but even so, they are, in most cases, assigned to roles they don't necessarily want to be in, such as cooking and administrative.
  - Women are placed in less valued roles in the brigades, such as handling the rake – which is the last tool used in firefighting and considered the easiest to handle and, therefore, less valued.
  - Women who do not have support networks for home and family care (children, elderly) participate less in education, training and selection processes.
- Women feel intimidated, and many do not respond for the recruitment campaigns for hiring brigades because they have little certainty of competitiveness, and because they are temporary contracts. The fact that it is a temporary contract is also a barrier for men. A woman, however, can be in a more vulnerable situation when she does not have a support network, in which she will always seek more stability, better income or longer contracts, because she has a family to provide for, unlike a man without children or a family who depend directly on him.
- There are more men in command roles, which also influences the perception that 'good' leaders in fire management should be male.

## Appendix 4. Explanatory note on the selection structure of the Prevfogo/Ibama and ICMBio brigades



### Prevfogo

The national coordination headquartered in Brasília is staffed by, for the most part, permanent IBAMA employees who have passed through a civil service hiring process by the federal government. During periods of drought, when wildfires are more common and intense, **supervisors** based across the country are assigned to oversee contracted brigades in the states to where they are deployed. **Federal supervisors** based in Brasília are also hired to support national coordination of Integrated Fire Management - IFM activities throughout the country. In the hierarchy, above these supervisors are the state coordination departments of Prefsogo/Ibama, who are also effective staff of Ibama, and below the state supervisors are Brigade Chiefs, Squadron Chiefs and firefighters. Both state and federal supervisors, as well as brigade chiefs, squadron chiefs and firefighters, are temporary public employees, hired for six months during the most critical periods in each region.

There are five types of brigades:

1. Ready employment (operation throughout the national territory);
2. Specialized (acting in a specific region, specialized by type of biome);
3. Indigenous (acting in Indigenous Lands to where they are allocated);
4. From rural federal settlements (acting in Settlement Projects where they are crowded) and,
5. 5. Quilombolas (acting in Quilombolas Territories to where they are allocated)

The selection process at Ibama begins with the launch of a public notice of intent to hire, registration of interested people, and application of the TAF and THUFA eliminatory and qualifying tests. The person who does not pass these tests or whose total points fall outside the number of vacancies available for the course, does not take the firefighter training course. That is, the number of available training vacancies is filled according to classification until the number of vacancies is fulfilled.

Those people who take the course are evaluated and, at the end of the course, classified based on the evaluation. The number of available brigade vacancies is occupied according to the classification until the number of brigade vacancies is fulfilled.

Information on initial applicants, course participants and those selected for the positions is contained in Prevfogo/Ibama spreadsheets. As the selections are made in a decentralized manner (at the headquarters and in the states) these spreadsheets are kept in the custody of each selection location. There is no centralization of information.

Prevfogo/Ibama is developing the National Fire Information System - Sisfogo, within which there will be a module for registering the entire selection process of brigades. When it is implemented, information on the number of women and men registered as applicants, approved or not in the TAF/THUFA and selected for the positions of the Federal Brigades Program of Prevfogo/Ibama, will be available and of easy access.

The fire crews are hired for a six-month period; in the following year, in the next dry/emergency period, a new brigade is established. Then the entire selection process is carried out again to hire fire crews. One person can apply and be selected every year, continuously or not. In the period of the Covid-19 Pandemic, hiring was done directly through curriculum analysis, a method that could be incorporated in the post-pandemic period, in specific situations where it is determined that direct hiring will better meet the objectives of the Center. However, it is important to point out that Prevfogo/Ibama chooses, in most cases, to carry out a complete selection process, with the application of TAF/THUFA, followed by a firefighter training course.

## **ICMBio**

One hundred and three federal UCs have a fire brigade<sup>[17]</sup>, and each is formed by a minimum of 6 people. Some are specialized and serve states other than their home state, and more recently, ICMBio formed a specialized national brigade based in Brasília to work in any UC, according to the need and degree of expertise required by a specific firefighting operation. ICMBio has two forms of hiring, 6 months (similar to Prevfogo/Ibama) and 2 years, but both forms have a waiting time of 2 years for a new contract.

In the years prior to 2020, the selection process was carried out in two face-to-face stages. The first was eliminatory and qualifying for the number of vacancies, with tests of physical aptitude and ability and use of agricultural tools. The second stage was a 40-hour theoretical-practical course requiring full attendance and a passing grade. With the COVID-19 pandemic, the selection methodology was changed and the tests and the face-to-face course were not used. The selection took place by analyzing candidates' curricula, according to the criteria established in the Public Notices.

# ANNEXES

## ANNEX 1.

### Glossary of main concepts and definitions related to gender equity.

<b>GENDER DISCRIMINATION</b>	Any distinction, exclusion or restriction made on the basis of sex, which has the effect or purpose of nullifying the recognition, enjoyment or exercise by women, irrespective of their marital status; also based on equality between men and women, human rights and fundamental freedoms in the political, economic, social, cultural or any other field.
<b>EMPOWERMENT</b>	The term 'empowerment' has become a keyword to contribute to social advancement in search of equality between men and women. Empowerment means that people - both women and men - can take control over their lives: decide and prioritize what matters to them, gain skills (or have their own skills and knowledge recognized), build self-confidence, solve problems and develop self-reliance. It is a process and an outcome.
<b>GENDER EQUITY</b>	Gender equity means that women and men are treated fairly according to their respective needs. This may include equal treatment or treatment that is different but considered equivalent in terms of rights, benefits, obligations and opportunities. In the context of development, a gender equity objective often requires integrated measures to compensate for women's historical and social disadvantages.
<b>FEMINISM</b>	A movement that seeks equal rights for women in society. An ideology that defends equality, in all aspects (social, political, economic), between men and women.



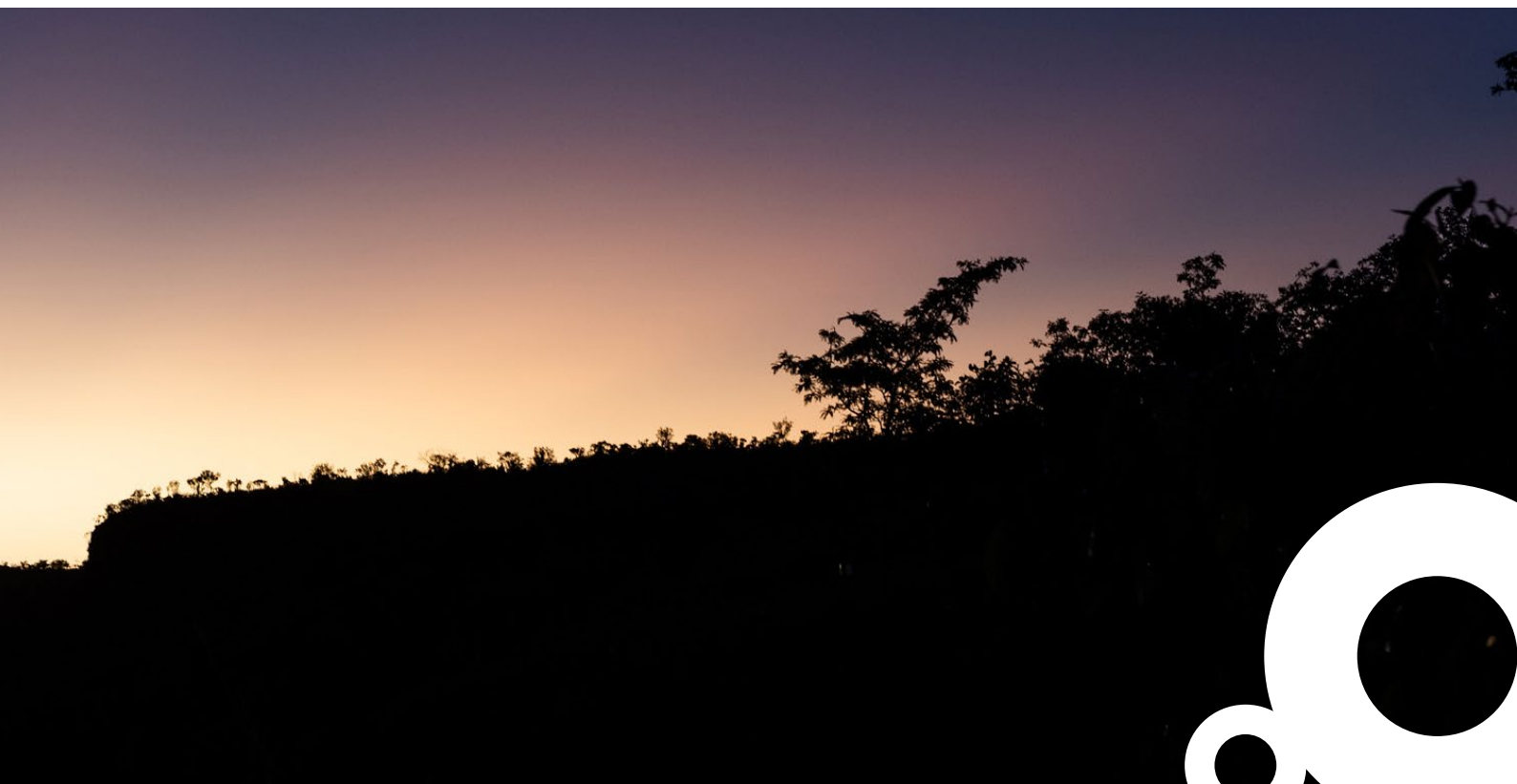
<b>GENDER</b>	Gender refers to the range of socially constructed roles and relationships, personality traits, attitudes, behaviors, values, relative power and influence that society attributes to the two sexes on a differential basis. Whereas biological sex is determined by genetic and anatomical characteristics, gender is an acquired identity that is learned, transforms over time, and varies greatly within and across cultures. Gender is relational and refers not just to women or men, but to the relationship between them.
<b>GENDER EQUALITY</b>	The academic discussion about “equality” starts from the idea that when dealing with equality, we are focusing on differences, therefore, we start from male rights to understand what women lack. In contrast, in the concept of “equity” there is the premise of respect for differences. The term ‘equality’ is the narrative that is most popularized (used by the UN, etc.), but USFS-IP, FIRE, and Forest Management and Fire Prevention programs in Brazil use the concept of equity. We understand that equality is a step for equality.
<b>MACHISMO</b>	Opinions and attitudes that defend male supremacy and reject the idea of equal rights between men and women. Culture and practices that deny women as subjects in society.
<b>SEXISM</b>	Discrimination of persons on grounds of sex. Although the term is used to refer to discrimination against both sexes, sexist practices mainly affect women.
<b>SEX</b>	Sex refers to the biological characteristics that define human beings as female or male. These sets of biological traits are not mutually exclusive, as there are individuals who possess both, but these traits often differentiate humans as female and male.
<b>UNCONSCIOUS BIAS</b>	Veiled prejudices that make people make certain decisions that deepen inequalities and reproduce stereotypes. They come from social heritage and unfounded ideas, such as associating women with domestic work and black people with jobs that require a lot of physical strength.

Sources: [2, 9, 18].

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# Systematization of responses to questionnaires on motivations and challenges for participating in events promoted within the scope of the Forest Management and Fire Prevention Program in Brazil

**17** online questionnaires applied before and after **9** different virtual events

Assessment period: **Nov 29, 2021** to **Apr 21, 2022**

Events focused on **forest fire prevention and suppression**, including courses, training and **leadership courses on fire management** and scientific events related to **integrated fire management**

**216** responses to pre-event questionnaires

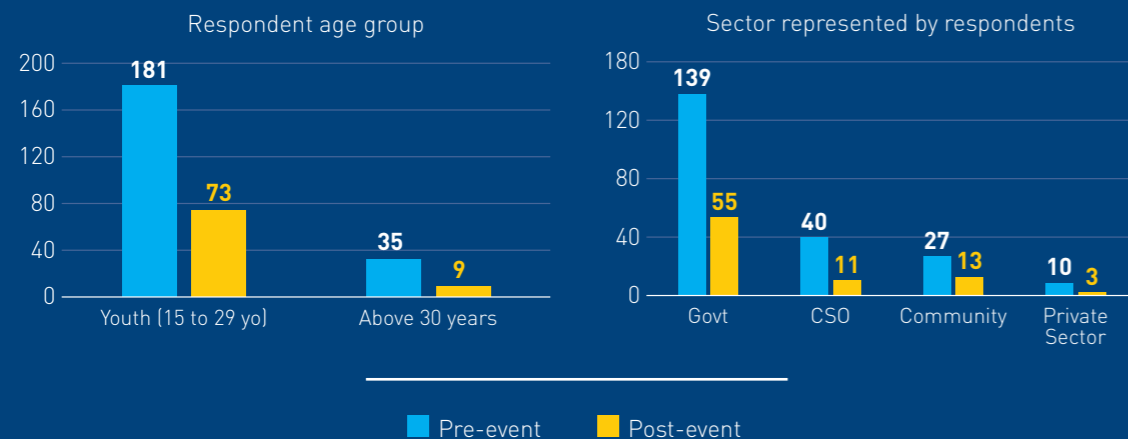


**82** responses to post-event questionnaires



Post-event questionnaire response rate: **38%**

## Profile of respondents



## PRE-EVENT

Response Type	Number of responses		
	Women	Men	Non-binary person
Meet goals and reach new positions	41	36	1
Learn something new	33	28	1
Share knowledge	26	16	1
Others	31	24	-

Number of responses: 238 [multiple choice]; n = 216

**Main MOTIVATIONS to participate in the event**

## POST-EVENT

Response Type	Number of responses	
	Women	Men
Learn something new	38	31
Share knowledge	20	21
Get certified and improve working conditions	20	12
Others	22	25

Number of responses: 189 [multiple choice]; n = 82

## PRE-EVENT

Response Type	Number of responses		
	Women	Men	Non-binary person
Dedication time and event time	60	32	-
No difficulty	56	45	-
Taking care of household and family tasks	22	8	-
Others	33	18	1

Number of responses: 273 [multiple choice]; n = 216

**Main CHALLENGES to participate in the event**

## POST-EVENT

Response Type	Number of responses	
	Women	Men
None	20	20
Dedication time and event time	20	14
Taking care of household and family tasks	9	3
Others	8	3

Number of responses: 97 [multiple choice]; n = 82

## KEY MESSAGES



**Disaggregate questions related to gender identity**

For example: female, male, non-binary, transgender woman, transgender man, etc. instead of just putting 'Others'.



**Create intention to include women in events**

Strategies include continuing training, in which women receive more than one type or theme of training and successive trainings that allow people advance on learning paths and develop professional and leadership profiles.



**Understand the different challenges among participants**

Regardless of gender identity, the main motivations were improvement at the individual and institutional levels. However, women had more difficulties with time of dedication, time of the event and care with household chores.

## ACTIONS TO DEAL WITH SOME OF THE CHALLENGES



Define with participants the best days of the week and times of events



Offer more than one event of the same type on alternate days of the week and/or times





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