



Perspective

Overcoming gender-related challenges and supporting women in conservation in Latin America

Marcela Márquez-García^{a,b,*,1}, Cristina Nuñez-Godoy^{c,d,1}, Antonieta Eguren^e, Claudia Segovia-Salcedo^f, Farah Carrasco-Rueda^g, Nicole Püschel^e, María Moreno de los Ríos^h, Andrea Cáceresⁱ, Charo Lanao^j, Paulina Stowhas^k, Mariana Varese^l, Jonathan Dain^{m,n,o}, Karen A. Kainer^{m,n,o}, Lyn C. Branch^{p,n}

^a Centro de Humedales Río Cruces, Universidad Austral de Chile, Cabo Blanco Alto s/n, Valdivia, Chile

^b Instituto de Conservación, Biodiversidad y Territorio, Facultad de Ciencias Forestales y Recursos Naturales, Universidad Austral de Chile, Valdivia 5110566, Chile

^c Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET), Salta 4400, Argentina

^d Universidad Católica de Salta, Campus Castañares s/n, Salta 4400, Argentina

^e Wildlife Conservation Society, Av. Luis Thayer Ojeda 0115, of 705, Providencia, Santiago, Chile

^f Universidad de las Fuerzas Armadas ESPE, Departamento de Ciencias de la Vida y la Agricultura, Av. Rumiñahui s/n, Sangolquí, Ecuador

^g Keller Science Action Center, Science and Education, Field Museum of Natural History, Chicago, IL 60605, USA

^h HIVOS, San Ignacio E10-28 y Colina, Quito 170523, Ecuador

ⁱ Corporación para la Gestión Ambiental Biodiversa, Cali 760042, Colombia

^j Jallalla, 1 Tamlaghtduff Road, Bellaghy BT458JQ N, Ireland

^k Ministerio del Medio Ambiente, San Martín 73, Santiago, Chile

^l Wildlife Conservation Society, Calle Chiclayo 1008, Miraflores, Lima 15074, Peru

^m Center for Latin American Studies, University of Florida, Gainesville, FL 32611, USA

ⁿ Tropical Conservation and Development Program, University of Florida, Gainesville, FL 32611, USA

^o School of Forest, Fisheries and Geomatic Sciences, University of Florida, Gainesville, FL 32605, USA

^p Department of Wildlife Ecology and Conservation, University of Florida, Gainesville, FL 32611, USA

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ABSTRACT

Long-term solutions to environmental problems will not succeed without representative, collaborative, and inclusive approaches. Supporting women in conservation science and practice requires policymakers and organizations to consider a range of actions from those that mitigate biases to those that actively promote equality. Selecting a suitable course of action involves assessing information on both the hurdles and the potential for improvement. Here, we provide a perspective into challenges and opportunities gleaned from four workshops with women from 16 countries. These workshops and a final encounter, involving 163 women, culminated in bottom-up development of a regionally-constructed, gender-conscious conceptual model for change. The model encompasses the multiple domains in which nature conservation is implemented: resource management and local actor agency, knowledge co-production and management, and planning and policymaking. It also considers major challenges that disproportionately impact women: 1) Social, institutional, and cultural context; 2) Training and capacity building; 3) Production, reproduction, and dependent care; 4) Violence, safety, and recognition. We have a challenging task ahead, and the future of our field rests on our ability to provide more diverse, inclusive, and equitable spaces. Our workshops series fostered community and empowerment for women conservation scientists and practitioners in Latin America. We experienced how this empowerment and energy decisively translated into a practical conceptual model, a broad-based, growing network of over 1000 women, and an endorsed living Agenda of Women in Conservation for Latin America and the Caribbean (RedMeC) that supports women caring for nature worldwide.

* Corresponding author at: Centro de Humedales Río Cruces, Universidad Austral de Chile, Cabo Blanco Alto s/n, Valdivia, Chile.

E-mail addresses: marcela.marquez@gmail.com (M. Márquez-García), cnunez@ucasal.edu.ar (C. Nuñez-Godoy), aguren@wcs.org (A. Eguren), Mcsegovia@espe.edu.ec (C. Segovia-Salcedo), farahcarrasco@gmail.com (F. Carrasco-Rueda), npuschel@wcs.org (N. Püschel), Mmorenodlr@gmail.com (M. Moreno de los Ríos), acaceres@biodiversaenlinea.org (A. Cáceres), contact@charolanao.com (C. Lanao), pstowhas@mma.gob.cl (P. Stowhas), mvarese@wcs.org (M. Varese), jdain@ufl.edu (J. Dain), kkainer@ufl.edu (K.A. Kainer), branchl@ufl.edu (L.C. Branch).

¹ Márquez-García and Nuñez-Godoy have contributed equally to this manuscript and share first authorship.

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1. Introduction

Gender diversity has the potential to foster more effective and innovative solutions to conservation challenges (Jimenez et al., 2019). The notion of gender has evolved, now seen as a spectrum of an individual's own gender identity, that demands working environments that support individual's self-identification (Bass et al., 2018). Men generally dominated the conservation sphere early on, but some women have led conservation initiatives for decades (e.g., establishment of Brazil's national parks; Jorge Padua and Quintao, 1982). More recently, women have made significant contributions to programs as diverse as sustainable fisheries practices in Mexico and Colombia (Arroyo Mina et al., 2016) and waste management and plastics recycling in Central America (Hanson, 2017). Furthermore, evidence from Nepal and India demonstrate that when higher proportions of women participate in key community decision-making bodies, forest conditions can improve (Agarwal, 2009). Nevertheless, despite supportive policies and initiatives in some regions (Westerman, 2021), gender disparities continue to persist, constraining women's contributions to conservation. For instance, recent studies have revealed a limited number of female keynote speakers at ecology conferences (Lupon et al., 2021), as well as an underrepresentation of women among top-publishing ecologists and editorial boards of major biodiversity journals, with even fewer from the Global South (Hughes et al., 2023; Liévano-Latorre et al., 2020; Maas et al., 2021). This trend of limited participation of women extends to water resources management, land management, and national-level policymaking processes such as climate change in Latin America (Adeoti, 2021; FAO, 2017; Gumucio and Rueda, 2015).

Tackling the gender gap is necessary to advance environmental conservation (Poor et al., 2021), and understanding of gender-related challenges is crucial for this process. Existing literature explores challenges encountered by women in diverse geographies, particularly in developed countries (James et al., 2021). Across the United States, women leaders are sometimes challenged by blanket exclusion, salary inequality and difficulty negotiating for parity, harassment and inadequate organizational responses to injustices, assumptions of inadequacy and wrongness, responsibilities for childcare and eldercare, and personal safety in field research (Jones and Solomon, 2019; McGuire et al., 2012; Jones et al., 2020). Meanwhile, gender stereotypes (e.g., women expected to cook during fieldwork), risk of harassment, and toxic power dynamics are faced by women from Indonesia, Malaysia, Finland, and the United Kingdom (Thornton et al., 2019). In Indonesia, early-career women cite cultural-based gender norms as their primary challenge, while established career women report slow improvement in gender norms and the importance of mentors throughout their careers (Poor et al., 2021). In the global context, patriarchal structures and a lack of self-confidence constrain women working in sustainable development from becoming leaders (Shinbrot et al., 2019). However, not all women experience the same situations and challenges because gender interacts with other variables such as race, ethnicity, and social class (i.e., intersectional dynamics) in various contexts and scales (Paulson, 2016; Taylor, 2015).

Challenges and support systems for women in conservation, particularly in Latin America, are poorly understood. A review of publications that explored barriers and opportunities of women engaged in conservation and related fields worldwide, revealed that only 6 % of the 230 articles reviewed focused on South America (James et al., 2021). Research on gender bias is predominantly conducted in North America and Europe, and often centers on science and academia (Zandonà, 2022). Similarly, much of the existing research in Latin America has focused on science or academia within the field of ecology, not conservation explicitly (da Silva et al., 2019; Hipólito et al., 2022; Paz and Pardo-Díaz, 2024; Salerno et al., 2019; Spirito et al., 2024; Valentova et al., 2017). For example, recent research in Argentina highlighted the disproportionate impact of unpaid domestic work (including caregiving) on the productivity of female ecologists compared to their scientist male

counterparts (Lomáscolo et al., 2024). A study conducted in Brazil uncovered gender bias in academic funding allocation and representation within the ecology field, noting a lack of clarity about the underlying causes contributing to these disparities (Zandonà, 2022). Factors such as motherhood, absence of role models, and sexual harassment were discussed as potential explanations (Zandonà, 2022).

Despite these insights, a comprehensive understanding of the challenges faced by women in conservation-related fields in Latin America remains elusive. Two fundamental questions guided our work: What specific challenges do women encounter in conservation contexts in Latin America? And how can the identification of these challenges foster effective action within the conservation field? Our work aims to address this knowledge gap and support women's engagement in Latin America, by shedding light from the nuanced experiences of a broad spectrum of women involved in conservation science and practice in the region. We first provide a perspective into the challenges and opportunities faced by women working towards conservation in Latin America harnessed through a workshop series with a diverse group of women from 16 countries. These workshops and a final encounter culminated in bottom-up development of a conceptual model, a vibrant growing network to empower women in conservation (RedMeC), and an action Agenda that serves as a collective, living foundation for change.

2. A series of workshops; a call for action

Recognizing the paucity of opportunities for women-only encounters in conservation-related fields, we designed and implemented four workshops in the USA (2015), Argentina (2016), Ecuador (2016), and Peru (2018), followed by a concluding encounter in Peru (2019) (Table 1). Acknowledging gender as a continuum bounded but not limited to the designations male and female (Bass et al., 2018), the workshops targeted self-identified women working in conservation in Latin America. The 2015 and 2016 workshops were organized by a core group of faculty and graduate students. Following the first workshop, participants encouraged us to organize more events in their respective countries to further identify challenges and opportunities for women. The warm environment, openness, and trust generated in the workshops allowed attendees to share personal experiences. Whereas numerous academic spaces exist to share research and work, participants indicated that spaces were not available to collectively reflect and connect with their own experiences *as women* working in conservation. Each workshop had a minimum of three facilitators and two assistants, with former participants becoming organizers and facilitators. To attract a broad audience, we aligned the workshops and concluding encounter with conservation-related conferences and meetings (Table 1). We implemented event application and selection processes to ensure representation of diverse backgrounds, ages, and areas of action (e.g., academia, NGOs, government) (Fig. 1). As a result, over time the pool of participants included more women from the public sector, NGOs, international organizations, and local communities (Table S1). In the concluding encounter held in Peru, we purposely invited indigenous and community leaders to ensure their representation and include their perspectives. The number of women who applied for the workshops also grew, demonstrating a demand for these types of events that we were challenged to fill due to venue seating capacity and budget constraints (Table 1).

During the 2015–2018 workshops, we explored goals and gender-related challenges, as well as opportunities and strategies that lead to success of women in the conservation field. The workshops, each lasting about 9 h, comprised a welcome and presentation of objectives, followed by ice-breaker activities and attendees' personal introductions, four interactive sessions, a plenary discussion, and a summary wrap-up (Table S2 for details). We used personal reflections, small groups, listing and ranking of challenges, and open discussions to explore gender-related topics and build participant consensus (Kaner et al., 2014). We also drew upon story-telling sessions from select Latin

Table 1
Description of events, attendance, organizers, and funding sources.

Event title	Location and date	Attendance ^a	Key topics covered	Sponsor conference, organization, and funding
I Workshop “Women Scholars in Environmental Sciences and Sustainability: Opportunities and Challenges in Latin America”	Gainesville-FL, United States March 24–25, 2015	30 attendees: 6 facilitators 5 speakers 19 participants of 21 applicants	Goals and gender-related challenges faced by professional women working in conservation-related fields. Opportunities and strategies that lead to success of women in this arena. Experiences, needs, opportunities, and approaches of mentoring women.	Sponsored by: 64th University of Florida Center for Latin American Studies Annual Conference of “Envisioning a Sustainable Tropics” Organized by: University of Florida’s Southern Cone Conservation Leadership Initiative, and University of Florida’s Tropical Conservation and Development Program Funding: National Science Foundation (through the Global Women’s Scholars Network), and University of Florida’s Tropical Conservation and Development Program
II Workshop “Professional Women in Environmental Sciences and Sustainability: Opportunities and Challenges in Latin America”	Quito, Ecuador August 7, 2016	31 attendees: 3 facilitators 4 speakers 24 participants of 54 applicants	Identity, power relations and social constructions of gender and women. Goals and gender-related challenges faced by professional women working in conservation-related fields. Opportunities and strategies that lead to success of women in this arena. Future collaborations between participants by region or professional area.	Sponsored by: XII International Conference of Wildlife Management in the Amazonas and Latin America Organized by: University of Florida’s Southern Cone Conservation Leadership Initiative Funding: National Science Foundation, Gordon and Betty Moore Foundation, University of Florida’s Tropical Conservation and Development Program, and University of Wisconsin-Madison’s Environmental Conservation Program
III Workshop “Professional Women in Environmental Sciences and Sustainability: Opportunities and Challenges in Latin America”	Puerto Iguazú, Argentina September 17, 2016	24 attendees: 3 facilitators 4 speakers 17 participants of 39 applicants	Identity, power relations and social constructions of gender and women. Goals and gender-related challenges faced by professional women working in conservation-related fields. Opportunities and strategies that lead to success of women in this arena. Future collaborations between participants by region or professional area.	Sponsored by: VI Binational Meeting of Ecology Argentina-Chile Organized by: University of Florida’s Southern Cone Conservation Leadership Initiative Funding: National Science Foundation, Gordon and Betty Moore Foundation, University of Florida’s Tropical Conservation and Development Program, and University of Wisconsin-Madison’s Environmental Conservation Program
IV Workshop “Women in Biodiversity Conservation: Opportunities and Challenges”	Lima, Peru August 30, 2018	20 attendees: 3 facilitators 2 speakers 15 participants of 48 applicants	Identity, power relations and social constructions of gender and women. Goals and gender-related challenges faced by professional women working in conservation-related fields in Peru, with emphasis in fieldwork. Opportunities and strategies that lead to success of women in this arena. Future collaborations between participants by region or professional area.	Sponsored by: International Forum of Conservation Experiences and Initiatives in Latin America Organized by: Center of Ecology and Biodiversity (CEBIO), Ecuadorian Network of Women Scientists (REMCI), and University of Florida’s Southern Cone Conservation Leadership Initiative Funding: Bat Conservation International
Concluding encounter “Women in Conservation: Collectively Building the Women in Conservation Agenda for Latin America and the Caribbean”	Lima, Peru October 12–13, 2019	58 attendees: 12 facilitators and organizers 2 speakers 44 participants of 137 applicants + 170 women in conference workshop (no application process)	Strategies and lines of action to address the pressing challenges identified and faced by women in conservation.	Sponsored by: III Conference on Protected Areas of Latin America and the Caribbean (CAPLAC) Organized by: International Union for Conservation of Nature (IUCN), Center of Ecology and Biodiversity (CEBIO), Wildlife Conservation Society (Chile and Peru), Biodiversa, Ecuadorian Network of Women Scientists (REMCI), Rainforest Partnership, ONU Mujeres, University of Florida’s Southern Cone Conservation Leadership Initiative Funding: Gordon and Betty Moore Foundation, IUCN National Committee of the Netherlands (IUCN NL), Banco de Desarrollo de América Latina (CAF), Wildlife Conservation Society (WCS), Rainforest Partnership, University of Florida’s Tropical Conservation and Development Program, University of Wisconsin-

(continued on next page)

Table 1 (continued)

Event title	Location and date	Attendance ^a	Key topics covered	Sponsor conference, organization, and funding
				Madison's Environmental Conservation Program, Organización de Estados Iberoamericanos para la Educación, la Ciencia y la Cultura (OEI), Unión Europea/UICN - Proyecto Integración de Áreas Protegidas Amazónicas (IAPA), Unión Europea/UICN - Proyecto Amazonía 2.0, UICN - Proyecto Lista Verde Amazónico, and HiVOS

^a Attendance includes the event's participants, facilitators, and invited speakers.

American speakers who shared their experiences as women working in conservation, highlighting challenges and opportunities, along with strategies they employed to succeed. Over time, we adapted workshop objectives to explore additional topics and enhance current and future collaborations among attendees (Table 1). For instance, we explored key issues, such as identity, power relations, and social constructions of gender and women, and how they relate to the work of women in conservation. Outdoor social activities complemented the workshops, enhancing networking among workshop attendees (Fig. S3). For each workshop, we collected the materials generated (such as flipcharts, sticky notes, rankings, and notes of group discussions recorded by two assigned observers) for coding and thematic processing (Miles et al., 2020). Finally, via email, speakers and participants provided feedback through a post-workshop questionnaire. A clear insight was that more women-only encounters were needed to discuss and learn together about gendered experiences.

These workshops provided a broad diagnosis of opportunities and challenges faced by women in Latin America. Because participants raised mostly the same concerns across workshops, we recognized the urgent need to take action and develop mechanisms to overcome the diagnosed challenges and capitalize on the identified opportunities. Therefore, we designed a concluding encounter (Peru 2019) specifically to develop an instrument that would set a strategic foundation for gender equity in conservation-related fields in Latin America.

3. Workshop outcomes: accounting for challenges and opportunities

We identified three main themes of challenges through an analysis of workshop materials: personal, professional, and social. Personal challenges included seeking balance between work and personal life, meeting high personal expectations, and developing self-awareness and self-esteem. Professional challenges related to securing a fulfilling job that pays enough to make a living, continuing professional development, promoting interdisciplinary and collaborative work, improving teamwork, and contributing to network development. Among social challenges, participants highlighted breaking down cultural and social stereotypes and expectations, being heard and making decisions without being disparaged, empowering other women, and promoting mentorship and new leadership. The analysis also revealed cross-cutting challenges: breaking social structures and practices through which men hold power and predominate in leadership roles, deconstructing stereotypes, and eradicating physical and psychological violence.

Opportunities and strategies for success were diverse, including maximizing openings for continuous learning, seeking out women in leadership positions as role models, and encouraging solidarity. Cross-cutting opportunities comprised the current feminist movement; some progress on labor, sexual and reproductive rights; and the existence of collaborative networks of women. Several participants mentioned that they had never had the opportunity to openly discuss gender issues in relation to their working and personal lives or discuss their experiences as women in conservation. Decidedly, the encounters helped participants reshape their own personal narratives and created a sense of

community and empowerment (Table 2).

4. Building a conceptual model that outlines challenges faced by women working in conservation in Latin America

Using the workshop results, alongside a review of the literature and existing frameworks, we began formulation of a conceptual model to provide a visual representation and categorization of the challenges faced by women working in multiple domains of conservation in Latin America. Initially, results from the first four workshops were compiled and categorized to generate a summary infographic. This infographic served as the foundation for identifying pivotal challenges to be incorporated in the model. Subsequently, we identified action domains based on participant's input, reflecting their perceived roles within conservation. Special consideration was given to women who self-identified as "missing" or underrepresented from our standing domains, ensuring inclusivity in domain delineation. These action domains were conceived as interconnected or cross-cutting spaces, transcending organizational boundaries. For example, women from community organizations and NGOs actively contributed to broader territorial management, irrespective of their limited locality. Furthermore, we examined established frameworks such as the CBD Gender Action Plan, elucidating their alignment with challenges identified by workshop participants. Our approach diverges from global frameworks or agendas, as our identified challenges arose directly from the lived experiences of the participants themselves. Ultimately, during the concluding encounter, a proposed conceptual model was introduced, initiating a collaborative process characterized by collective deliberation and iterative refinement, culminating in the development of the final conceptual model we present here (Fig. 2).

The conceptual model comprises four categories of challenges that intersect all three domains and suggests examples for strategic action - all within a conservation approach. This conservation approach, which echoes the Promise of Sydney² and the rights-based approach to conservation (Campese, 2009; Springer et al., 2011), aims to promote bottom-up and long-term conservation actions through a holistic view that considers people and cultural and historical contexts. The domains (or action spheres) aim to integrate the spectrum of women working in conservation (i.e., academics, government and NGO professionals, and indigenous and community leaders). These domains are:

- The **resource management and local actor agency** domain relates to conservation practice, the action of community leaders and rights defenders, community-based conservation initiatives or projects led by external organizations (i.e., NGOs, national government, international organizations). This domain involves women who live and/or work in targeted conservation sites. For example, in the rural landscapes of the southern Andes, the role of women has been described as unique and fundamental in human-wildlife coexistence (Almuna et al., 2022). Women in Amazonia also have gained access

² https://www.worldparkscongress.org/about/promise_of_sydney

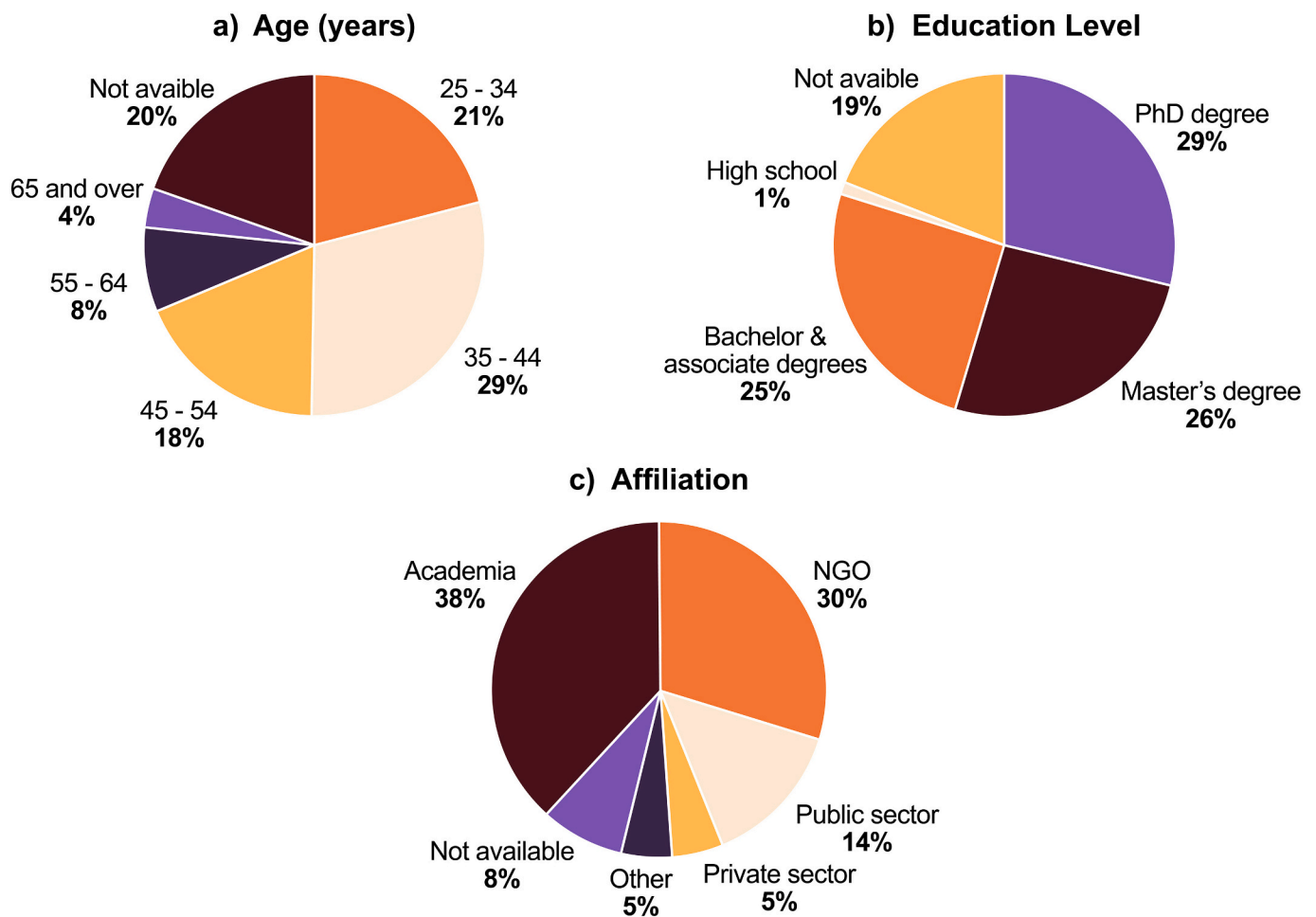


Fig. 1. Demographic characteristics of attendees (i.e., participants, facilitators, and invited speakers) from the four workshops and final encounter ($N = 163$) by a) Age, b) Education, and c) Affiliation. “Other affiliations” includes international corporations, international financial organizations, and local communities.

and control of natural resources and more participation in decision-making (Cronkleton et al., 2022).

- The **knowledge co-production and management** domain comprises the generation and sharing of knowledge, understood as a common good. It cultivates knowledge co-production and social innovation, integrating different knowledge systems and disciplines. This domain, which aligns with existing co-production frameworks (see Chambers et al., 2022; Norström et al., 2020), recognizes the multiple ways of knowing and doing to better address complex socio-ecological problems. By including various dimensions of diversity in the co-production process (such as gender), as well as addressing conflicts and power imbalances among stakeholders, knowledge outcomes are enhanced (Pfeiffer and Butz, 2005; Kernecker et al., 2017).
- The **planning and policymaking** domain involves strategic conservation planning to influence decision-making and/or create public policies. It also includes defense of women’s rights and supports those who lead and participate in social movements. For example, the historic decision at the United Nations Climate Conference (COP27) to finance loss and damage from the climate crisis was reached through negotiations led by female ministers.³

The following four categories of challenges that impact women in the

three domains emerged from our series of in-person workshops, exclusively within the context of Latin America. These challenges also have been documented in the literature for other regions (e.g., Castañeda Camey et al., 2020; Grogan, 2019; James et al., 2021; Jones et al., 2020; Jones and Solomon, 2019; Tulloch, 2020).

- **Social, institutional, and cultural context:** Refers to the lack of public and institutional policies regarding gender equity in many arenas (e.g., maternity leave, distribution of benefits, natural resource access, and land tenure). It also encompasses cultural and social norms underlying the perpetuation of stereotypes and marginalization of women in deliberations and decision-making processes.
- **Training and capacity building:** Addresses the need to ensure rights to education, generate new opportunities for continuous training, and promote interdisciplinary and transdisciplinary approaches, collaborative work, and mentoring.
- **Production, reproduction, and dependent care:** Refers to the challenge of balancing and reconciling women’s performance between personal and work life, as well as sharing dependent care responsibilities equally. It also deals with invisible barriers that prevent women from advancement or personal growth within an organization (i.e., glass ceilings), and pursuing (or not) motherhood. Finally, it includes the undervaluation of the daily (unpaid) work performed by women for their welfare and that of their communities, which is fundamental in support of the mental, physical, and relational integrity of human beings.

³ <https://www.gob.cl/en/news/cop27-approves-creation-historic-loss-and-damage-fund/>

Table 2
Quotes from workshops' attendees.

"I talked about my life with honesty, from my origins, overcoming obstacles and enjoying the success that made me who I am today. I felt inspiring and inspired." (RM)

"I believe that all of us are an example of courage, creativity, and hope. These activities are essential to generate more collaboration among women." (OB)

"I came to the workshop to give (by sharing my experience at the professional context), but I left receiving much more, enriched with what I saw and heard from this amazing group of women." (MCF)

"Participating in these workshops made me realize the true power of women: create, nurture, and transform." (CSS)

"It was an amazing experience to be with all those incredible women and see how a group of strangers became a group of empowered women ready to change the world." (AE)

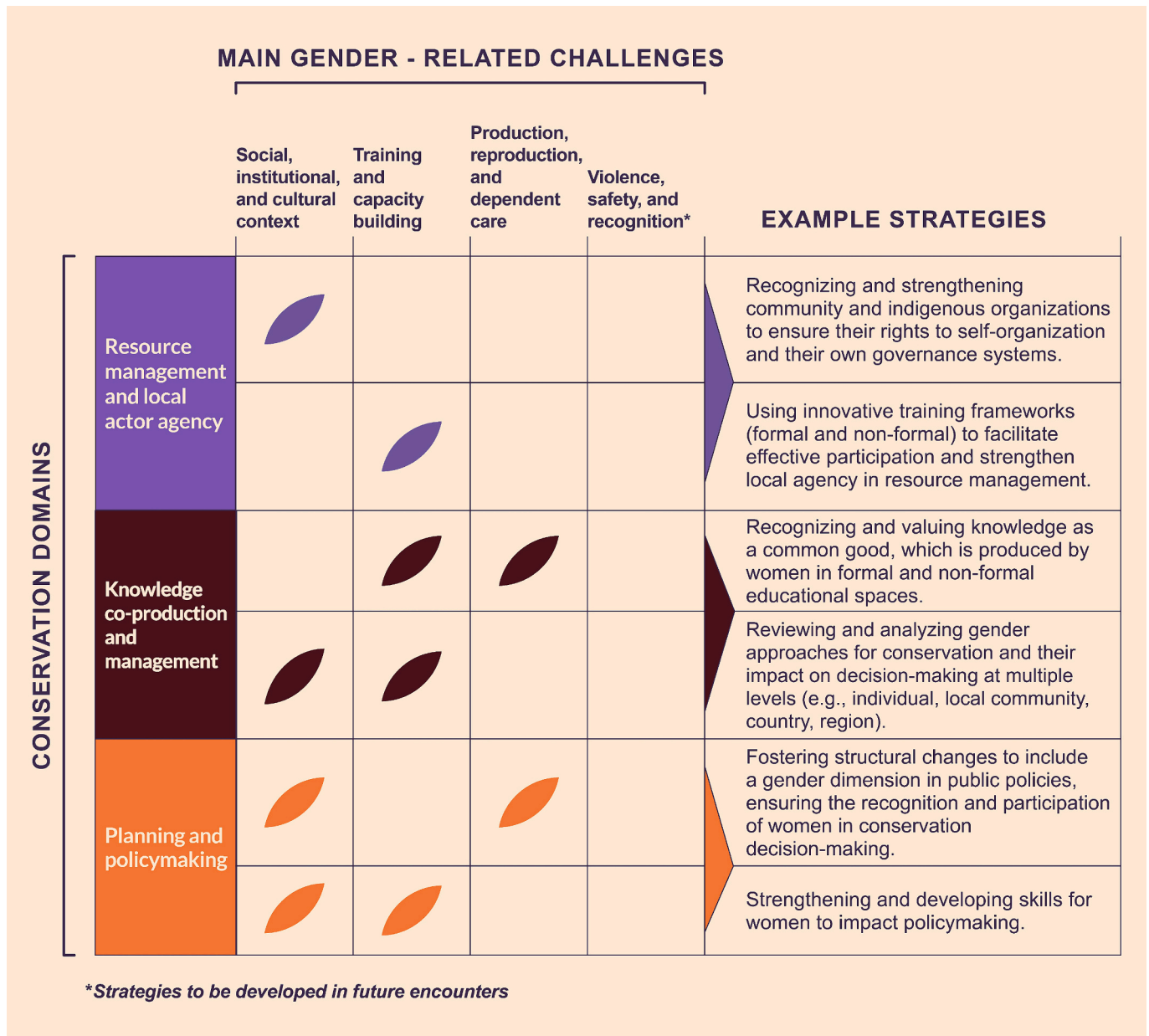


Fig. 2. Conservation domains and examples of strategies to address gender-related challenges that women in conservation face. The leaves represent the specific challenges that the strategies address within each conservation domain, supporting the goal of building a holistic conservation approach that embraces gender diversity and acknowledges the need to dramatically shift perspectives and practices. See the Agenda of Women in Conservation for Latin America and the Caribbean for specific actions to advance these strategies (RedMeC, 2020).

- **Violence, safety, and recognition:** Acknowledges the sexual, physical (even femicide), psychological, and institutional violence that women may face in every domain. It embraces women's rights to feel secure, empowered, and valued in their work.

These domains and challenges derived from our bottom-up approach are consistent with some elements of regional and international frameworks regarding gender-related topics in the environmental field. For example, our *training and capacity building* challenge category parallels the *delivery* sphere of the CBD's (Convention on Biological Diversity) four work spheres in their 2015–2020 Gender Plan of Action framework; CBD *delivery* seeks to ensure a balanced participation by offering capacity-building for women's groups. Our framework targets challenges and actions for women working across multiple domains in conservation, while the CBD framework seeks to integrate a gender perspective within CBD Secretariat divisions. Our workshop participants also highlighted structural challenges to gender equality: socioeconomic inequality, violent and patriarchal cultural patterns, sexual division of labor and the unfair social organization of care, and concentration of power in the public sphere. While conservation specific, these are akin to the wider sustainability challenges described in the Montevideo Strategy for Implementation of the Regional Agenda within the Sustainable Development Framework by 2030.⁴ Furthermore, our conservation-focused conceptual model uniquely link these structural challenges to conservation domains (or action spheres), thus aiding in the identification and development of strategies to address these challenges for women working in conservation in Latin America.

5. Developing mechanisms to address challenges and leverage opportunities

Our concluding 2019 encounter, which aimed to establish a strategic direction for promoting gender equity in conservation-related fields across Latin America, culminated in the creation of a supporting network.⁵ Network members, comprising workshop participants and other interested women, are committed to information exchange and regional support to other women, including leading and participating in activities (e.g., workshops, seminars, and virtual conferences) designed to empower women in conservation throughout the continent, as well as strengthen connections with community leaders and rights defenders. Cross-field and cross-career-stage interactions foster connections and promote professional opportunities. As of 14 April 2024, the Network has 1064 registered members and more than 6424 Facebook followers.

Moreover, during this final encounter, we validated our conceptual model and used it to develop an action agenda, collectively endorsed by participants. This agenda encompassed a full list of strategies and supporting lines of action suitable for addressing the challenges of women working in conservation in each domain (RedMeC, 2020). The proposed agenda is an example of tools that could be developed using our conceptual model to guide design of gender-aware policies for conservation (see Gumucio and Rueda, 2015 for an overview of gender policies). For each model domain, participants envisioned a desired future and identified limitations to getting there. Then, they proposed concrete actions to advance from the current state to the desired future, thus creating a draft agenda. In an open plenary session attended by 170 women from the III Conference on Protected Areas of Latin America and the Caribbean, we presented the draft agenda for feedback and validation.

⁴ <https://www.cepal.org/en/publications/41013-montevideo-strategy-implementation-regional-gender-agenda-within-sustainable>

⁵ Latin American and Caribbean Women in Conservation Network: <https://mujeresenconservacion.home.blog/>

Additionally, we sought input and validation from all previous workshop participants and after integrating their comments, launched the first public version of the agenda⁶ in October 2020. The agenda is a living document, open to feedback and contributions at any time. An online form on the Network's website continues to collect member inputs for the next agenda version.

For example, for the strategy "Recognizing and valuing knowledge as a common good, which is produced by women in formal and non-formal educational spaces", the living agenda contemplates three lines of action (RedMeC, 2020). The first line of action involves creating inclusive environments for women's engagement in knowledge generation and management within conservation by: (i) promoting spaces to discuss and share conservation knowledge, (ii) organizing events to address gender stereotypes, (iii) promoting spaces to reflect on the diverse roles that women play in conservation, and (iv) influencing donors and funding opportunities to prioritize the participation of women. The second line of action is to promote effective knowledge management by: (i) fostering learning through diverse experiences, discussions, and trainings, and (ii) integrating outreach into research project planning while considering the context and needs of participants. The third line of action involves integrating traditional, indigenous, and ancestral women's knowledge into both formal and non-formal environmental curricula through systematic documentation, dissemination, and integration, and facilitating its inclusion in educational initiatives.

6. Conclusion

We have engaged hundreds of professional women who work in conservation in Latin America through a series of events that aided in identifying challenges and opportunities, formulating a conceptual model, and developing an action agenda. How can these outcomes help professional women in conservation? First, the workshop series produced an extensive diagnosis of challenges faced by a diverse group of women throughout Latin America. Despite global differences in political and cultural contexts, many challenges seem transversal to female conservation leaders worldwide (see Jones and Solomon, 2019). Studies conducted at a regional level, such as ours can serve as a foundation for comparative analyses to discern similarities and differences in gender-related challenges and strategies across diverse regions worldwide (e.g., Europe and Asia). Second, to make conservation a more inclusive field, multiple solutions need to be applied at individual, group, and organizational levels (Hogue and Lord, 2007; Jones et al., 2020). Our conceptual model and agenda help to identify gender-related challenges and develop guiding strategies, interventions, and policies to address these challenges across multiple domains. Third, these instruments can serve as a template to help women organize and address challenges in other regions of the world (e.g., Jones et al., 2020; Poor et al., 2021; Shinbrot et al., 2019). Although these instruments were developed for and by women working in Latin America, they can be adapted to empower women and guide action towards gender equity elsewhere.

Our study yields significant implications for conservation science, practice, and policy-making. By delineating specific challenges such as the scarce gender-aware policies and the persistence of cultural stereotypes, our study provides some specific strategies per domain, contributing to the advance of gender equity within the conservation field. Policymakers and organizations can leverage our findings to advocate for gender-sensitive policies and practices, promoting inclusivity and diversity at all levels of the conservation sector. For example, cultivating gender-balanced communities can lead to better science and team productivity, because women provide new perspectives and enhance collective creativity, innovation, and knowledge (Hofstra et al., 2020;

⁶ Agenda of Women in Conservation for Latin America and the Caribbean: <https://mujeresenconservacionhome.files.wordpress.com/2021/03/agenda-mujeres-conservacion-interactivo.pdf>

Nielsen et al., 2017; Rice, 2011). Furthermore, by addressing challenges surrounding gender stereotypes and violence, conservation organizations can create more inclusive environments that value the contributions of all individuals, regardless of gender. Also, our study highlights the need to develop mentoring programs and ongoing learning opportunities to facilitate the professional growth and advancement of women in conservation. For example, despite Argentina's higher representation of women in its scientific institutions compared to the global average, challenges persist in advancing women to higher positions, echoing similar patterns observed in Brazil's scientific community (Lomáscolo et al., 2024; Zandonà, 2022). Lastly, our case study demonstrates the importance of empowering women in conservation by providing opportunities for them to be heard, make decisions, and participate in leadership roles. For example, a more gender-balanced park ranger workforce significantly enhanced wildlife conservation, park management, and the relationship between rangers and communities in location (Seager et al., 2021). Through women's empowerment, conservation organizations can benefit from a more diverse range of perspectives, experiences, and solutions, thereby fostering more effective conservation outcomes.

We have a challenging task ahead, and the future of our field rests on our ability to provide more diverse, inclusive, and equitable spaces (Chaudhury and Colla, 2021; UNESCO, 2024). Our first workshop occurred as a one-time event, but created such powerful momentum that we were compelled to engage more women throughout the hemisphere in a series of encounters. Previous research has shown the importance and need for programs and opportunities for women in ecology and conservation that go beyond formal training and traditional professional development to include those that create a sense of community and empowerment (Horner-Devine et al., 2016; Kainer et al., 2006). Our workshop series fostered community and empowerment for women conservation scientists and practitioners in Latin America. We experienced how this empowerment and energy decisively translated into a practical conceptual model, a broad-based, growing network, and an endorsed living agenda that can be used to support women caring for nature worldwide.

Ethics statement

The 2015 and 2016 workshops were organized under the "Global Women's Scholars Network" project funded by the US National Science Foundation and approved by the research protocol IRB 069-13H. We followed this protocol to conduct our 2018 and 2019 workshops because there were no specific rules or policies for social and behavioral science research in Peru at that time.

CRediT authorship contribution statement

Marcela Márquez-García: Writing – review & editing, Writing – original draft, Visualization, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Conceptualization. **Cristina Nuñez-Godoy:** Writing – review & editing, Writing – original draft, Visualization, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Conceptualization. **Antonietta Eguren:** Writing – review & editing, Visualization, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Conceptualization. **Claudia Segovia-Salcedo:** Writing – review & editing, Resources, Project administration, Methodology, Investigation, Funding acquisition. **Farah Carrasco-Rueda:** Writing – review & editing, Resources, Project administration, Methodology, Investigation, Funding acquisition. **Nicole Püschel:** Resources, Project administration. **María Moreno de Los Ríos:** Resources, Project administration. **Andrea Cáceres:** Resources, Project administration. **Charo Lanao:** Resources, Project administration. **Paulina Stowhas:** Resources, Project administration, Funding acquisition. **Mariana Varese:** Resources, Project administration. **Jonathan Dain:** Writing – review & editing,

Supervision, Methodology, Investigation, Funding acquisition, Conceptualization. **Karen A. Kainer:** Writing – review & editing, Supervision, Methodology, Investigation, Funding acquisition, Conceptualization. **Lyn C. Branch:** Writing – review & editing, Supervision, Methodology, Investigation, Funding acquisition, Conceptualization.

Declaration of competing interest

The authors declare no conflict of interest.

Data availability

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy restrictions.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.biocon.2024.110625>.

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