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Review

The Gender Gap in Land Sciences: A Review of Women's Presence on the Editorial Boards of Peer-Reviewed Journals

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Abstract: Women are disadvantaged across all stages of academic publishing. In science, contribution to editorial boards of journals is evidence of a high reputation within a specialty or field. Therefore, the low presence of women on editorial boards can be considered a disadvantage indicator for women in academia. This study aims to highlight the gap in women's contributions in land science journals. We assessed the gender composition of editorial boards in 60 peer-reviewed journals using systematic reviews and meta-analyses, and we obtained data on current and past editorial boards of these journals. The result shows that the current number of editorial board members is 5197 of which only 25.47 percent are women. Gender inequality is very evident in this group of journals to the extent that journals with a high impact factor indicate inequality that is even more than 75 percent. The results of the time series analysis have also shown that the presence of women on editorial boards has increased over the last decade, although this increase has been more in the Nordic countries. The geographical distribution of editorial board members is also quite unequal in the North and South, 83 percent of female editorial board members are from northern countries, while only 12 percent are from the global South. According to the results, there is still a long way to go to achieve gender equality, especially in the field of land science. Our results also support previous findings of a considerable gender difference in urban land science, geoscience community, biodiversity conservation, and veterinary sciences. Thus, the academic community, editors, and journals must take proactive measures to achieve gender balance.

Keywords: land sciences; women; peer-review journal; gender inequality; editorial board

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1. Introduction

Despite the considerable progress women have made in schools and businesses in recent decades, a significant gender imbalance persists, particularly at higher levels of employment [1]. According to newly published reports, among scientists and engineers, more men than women were employed full-time in 2021 (13.3 million men versus 10.7 million women [2]. Gender inequality is also pervasive in scientific institutions (e.g., companies), organizations (e.g., professional associations), and gatherings (e.g., conferences) [3].

Numerous studies have shown that gender differences exist in a number of scientific areas and characteristics, including mentoring and employment, salary, grants and funding, and publications and authorship. Santiago-Vela and Merganser (2022) found that there is a gender overeducation gap, with women at a higher risk of overeducation than men [4]. Additionally, a recent article in Nature [5] confirms that women lag behind in global scientific production and citations when considering author ranking (first or last), countries, collaboration practices, and citation density across disciplines [6]. As Moss-Racusin et al. (2012) findings also show, both male and female science faculty are less likely to hire a female applicant for a laboratory director position than an identical male applicant, and

this bias is explained by the perception of women as less competent [7]. Intersectionality, the confluence of different biases (e.g., gender and race), adds complexity to inequality in science [8].

Outside of the workplace, scientific organizations and conferences, scientific journals, and grants also play an important role in supporting researchers by serving as stepping-stones to academic careers and demonstrating where and how scientists participate in the scientific community [9–11]. Participation of men and women in scientific publications, whether in authorship, peer review, or editorial boards of scientific journals, is considered one of the most important ways to assess gender equality in science [12], and gender composition of editorial boards is one indicator that can be used to quantify the current representation of women in science [13].

In scientific discourse, the underrepresentation of women in science is often attributed to the lack of women "Leaky pipeline (A common metaphor for the underrepresentation of women in science and STEM fields [14]) ". The pipeline consists of different segments corresponding to educational levels (e.g., elementary school, middle school, high school, college, etc.) [15]. Women exit the pipeline by choosing other options [16] or not progressing [17]. If there is a shortage of supply or leakage in one stage, this naturally explains the shortage in subsequent stages. For more than two decades, studies have shown that women in academia must perform at higher levels than men to receive equivalent credit [18–20]. Indigenous and racialized women, in particular, are more often characterized as not brilliant enough for discovery compared to men and are less likely to be considered scientific leaders [21].

When compared to the gender of a journal's authors, women are underrepresented on editorial boards [22–26]. Fox et al.'s (2016) finding showed that men invited to peer review were slightly less likely to respond to the peer review invitation and slightly less likely to agree when the inviting editor was female and not male. The low representation of women on editorial boards may affect the research community in several ways [22]. Appointment to an editorial board conveys a certain prestige that can influence employers' decisions about hiring, tenure, or promotion [26]. Wing et al.'s (2010) findings also show that the behaviour of editors on editorial boards has significant differences between men and women in some respects, suggesting that more women on editorial boards could increase the quality and diversity of the review process. As tenure on editorial boards increased, men rejected more manuscripts than women [27].

In most developing countries, articles with women in dominant author positions are cited less than those with men in the same positions. Additionally, this citation disadvantage is exacerbated by the fact that women's publication portfolios are more domestic than those of their male colleagues; they benefit less from the additional citations that international collaborations bring e.g., [4,28–30]. Penaluna and Arismendi's (2022) findings show that publications led by women consistently have fewer citations compared to men. The gender gap exists because of differences in stereotypes about women's attributes and abilities, greater parental responsibility, and the resulting "pipeline problem" [31]. Results from the Popp et al. (2019) survey indicate that both genders view male geoscientists as significantly more gender-biased than female scientists [3]. In addition, female geoscientists are more than twice as likely as male geoscientists to experience negative gender bias in their workplace and in scientific organizations.

Consideration of different academic disciplines, perceptions, knowledge, and approaches are critical to understanding these complex interactions of land use systems and to addressing the challenges of managing them sustainably. For example, studies have shown that actions and decisions made by women are often more effective in conserving biodiversity [32] or reducing greenhouse gas emissions. However, there is extremely limited research that focuses on gender equality in land science, such as Kamau et al. (2022), who examined gender and diversity in land use science [32]. In addition, many scientists have examined gender differences in research performance and scientific influence. To our knowledge, the field of "land" has not yet been subjected to such an analysis. This study

asks: is there a gender gap in land use science journals? Is the gender gap different for high-ranking journals than for low-ranking journals? Are male and female members of editorial boards equally represented in the global South and North? What is the trend in women's participation on editorial boards? Is the trend increasing or decreasing? The goal of this study is to provide a global picture of the perceptions and implications of gender inequality in land science journals. A thorough understanding of these relationships is critical to developing interventions that are widely accepted in the community [33].

2. Materials and Methods

A systematic review and meta-analysis was conducted for this study. We collected data in 3 main steps: journal selection, data collection, and analysis (Figure 1).

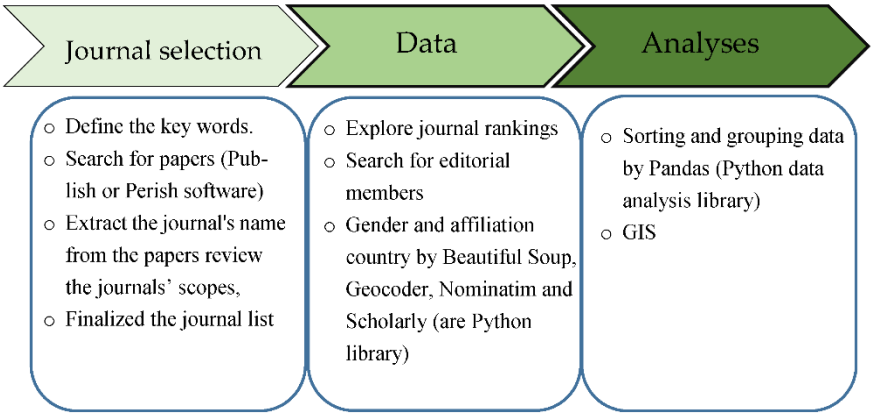

Figure 1. Research Methodology Flowchart. The first stage was the identification of the journals; the second was the data collection; and finally, a group of methods for data analysis was chosen.

2.1. Journal Selection

As the first step in this study, we began by identifying the areas in which we needed to examine and illuminate the larger issues facing women in science. Our first task was to identify keywords in land science. Land science encompasses many disciplines, and accordingly, studies are published in journals from many fields. The keywords studied are as follows: "land cover, land use, land cover change, land management, landscapes, land use policy, landscape ecology, land use dynamics, land use planning, land use management, land economics, land development, land use intensity, land sustainability, land markets, land allocation, and land modelling".

In the next step, Harzing's Publish or Perish software was used to perform this bibliometric analysis [34]. This software is an internet-based search engine that collects raw data without time constraints through Google Scholar and allows users to perform a literature search and calculate various metrics for up to 1000 articles found based on a comprehensive set of search terms [35]. The result of this step was over 4000 articles (original papers and case reports, reviews, and chapters) published between 2000 and 2021. We then extracted the journals in which these articles were published. In this step, 187 journals were identified. We included journals in which more than 30 percent of the published articles (between 2000 and 2021) were related to the keywords we studied. In the final step, we reviewed the sections of the 87 journals in Web of Science (WOS), SCImago Journal Rank (SJR), and on the journals' home pages. In this step, a total of 60 journals focused on regional science were selected for further analysis. All journals were peer-reviewed academic journals (see Appendix A).

2.2. Data

We searched the selected LS journals' rankings on WOS and SJR databases and sorted the journals by H-index (Table A1). We completed the database search with the 2021 ranking.

We also used the Beautiful Soup package (a Python web scraping package) to extract the names of editorial board members from 60 selected journals. A total of 5197 members were identified in this step. We used Geocoder, Nominatim, and Scholarly (a Python library) to identify gender. We then classified all editors as either male or female. We did not find any individuals who identified as non-binary. We also recorded the editor's affiliation, country, continent, and editorial position, as well as the impact factor and name of the journal for which he or she worked.

2.3. Analyses

We used Python and GIS software to analyse the data. After data collection, we used the Panda library to group data based on journals, genders, and calculate the sex percentage of each journal, and re-index data based on journal name. Pandas is data manipulation and analysis software library written for the Python programming language. It provides data structures and operations for manipulating numerical tables and time series in particular [36]. We also used GIS software to analyse the geographical distribution of editorial board members in different countries.

3. Results

3.1. Overview

The final data set included 5197 editorial members (mean = 39.1 editors per journal; minimum = 5 and maximum = 114), including 25.47 percent women (1324/5197) and 74.52 percent men (3873/5197).

Of the total 165 editors-in-chief (min = 1 and max = 15), 32.12 percent were women (53/165) and 67.88 percent were men (112/165).

- Of the 60 journals selected, 26.67 percent (16/n = 60) were open access, 58.33 percent (35/n = 60) were closed access, and 15 percent (9/n = 60) were unknown.
- The journals' impact factor (IF) also ranged from 0 to 10,218, with Land Use Law & Zoning Digest having the lowest IF, and Remote Sensing of Environment and Progress in Human Geography having the highest IF. We also divided the journals into 3 groups according to the journals' IF: Journals with an IF less than $\geq$1 were 26.67 percent (16/n = 60), journals with an IF of 5 were 53.33 percent (32/n = 60), and journals with an IF greater than $\leq$10 were 20 percent (12/n = 60).
- According to the H-index of journals, 26 journals (43.33 percent) were between 1 and 50, 15 journals (25 percent) were between 50 and 100, and 19 journals (31.67 percent) had an H-index of more than 100. Ecological Modelling (0) and Journal of Remote Sensing of the Environment (281) had the highest H-index.
- Of the 60 selected journals, 50 percent (30/60) were ranked Q1, 25 percent (15/60) were ranked Q2, 5 percent (5/60) were ranked Q3, 10 percent (6/60) were ranked Q4, and 10 percent (10/60) were ranked n/a (unknown).

3.2. Gender Analysis by Impact Journals

Among the 60 journals, the journal of *Sustainability* has the highest number of editorial board members, with 435 (21.66 percent) female and 1573 (78.34 percent) male. The journal of *Forests* has 482 editorial board members, of which 107 (22.20 percent) are female and 375 (77.80 percent) are male, and third is the journal of *Land*, with 238 editorial board members, of which 59 (24.79 percent) are female and 179 (75.21 percent) are male (Figure 2).

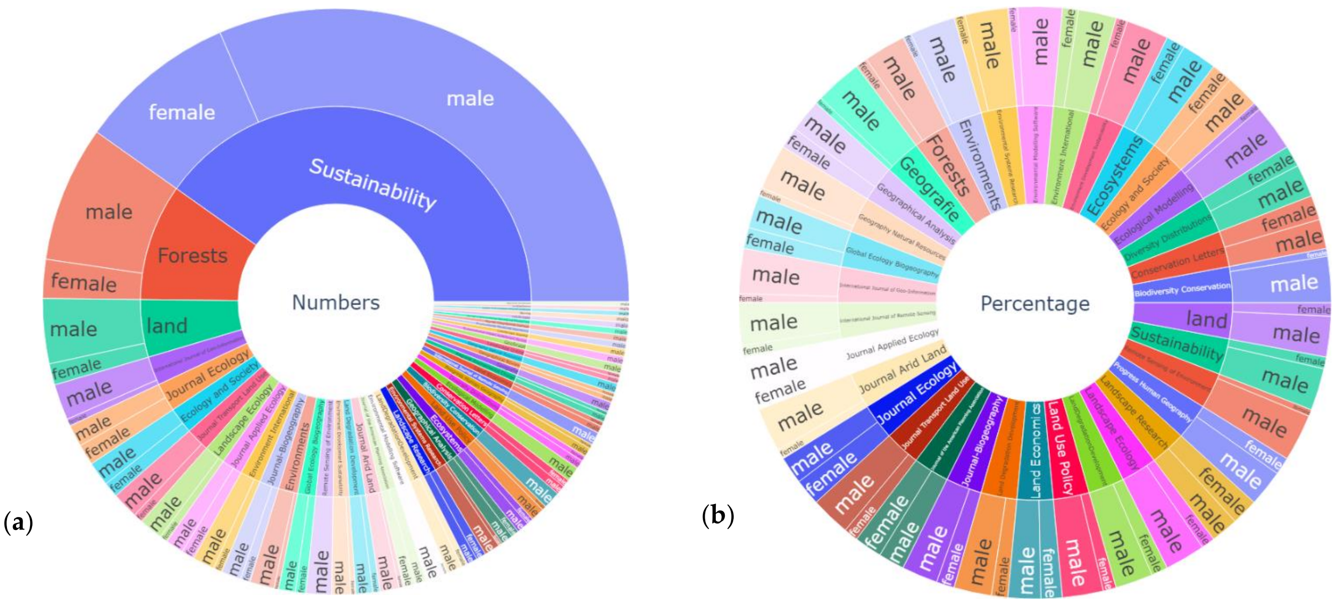

Figure 2. (**a**) The number and (**b**) The percentage of male and female editorial members in each LS journal selected.

As Figure 2b shows, in all LS journals, the percentage of female editorial board members is lower than that of male members. In more than 80 percent of the journals, this percentage is even less than one-third. *Journal of Ecology*, *Landscape Research*, and *Landscape Online* have the highest percentage of women on the editorial board with 49.15, 49.09 and 44.44 percent, respectively, while *Landscapes*, *Remote Sensing of Environment*, and *Geography* journals have the lowest percentage of women with 10 percent, 12.50 percent and 12.90 percent, respectively.

This discrepancy was also found among the Editor-in-Chief members. Of the total 165 members, 32.12 percent were women and 67.88 were men. Furthermore, if we compare the percentage of women and men in each journal, we can see that in 43.33 percent (26/60) of the journals, 100 percent of the editors-in-chief were men, and in 16.67 percent (10/60) of the journals, 100 women were editors-in-chief (Figure 3).

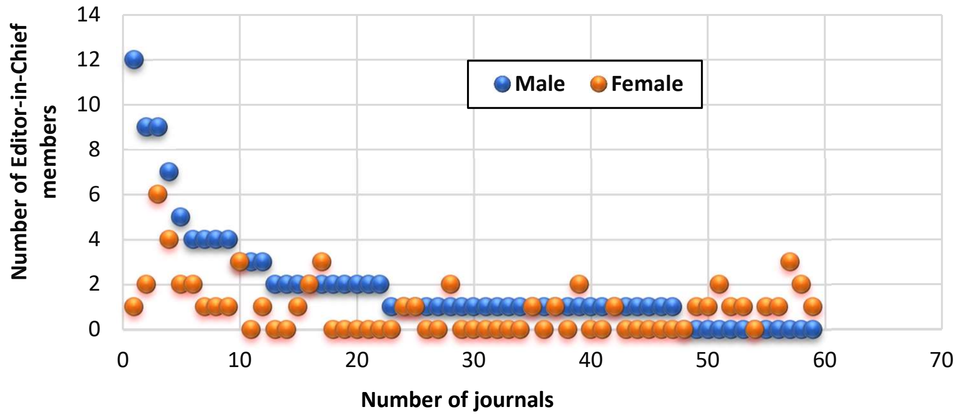

Figure 3. Gender contributions in Editor-in-Chief in each selected LS journal.

The journal *Forests*, with a total of 15 editorial board members, 40 percent (6/15) female and 60 percent (9/15) male; *Sustainability*, with a total of 13 members, 7.69 percent (1/13) female and 92.31 percent (12/1) male; and *Land*, with a total of 13 members, 36.36 percent (4/11) female and 63.64 percent (7/11) male, have the highest Editor-in-Chief members.

3.3. Gender Analysis by Impact Factor

We also compared gender contributions to journal rankings. According to the findings, female participation in high-ranking journals is 26/99 percent and 18/97 percent in low-ranking journals. The results of the 15 high-ranking and low-ranking journals also show that the percentage of women's contributions in all journals is lower than men's Tables 1 and 2.

Table 1. Comparing gender contributions in high-ranking.

	Journal Name	Gender (Editors)	Participate Percent	H Index
1	*Landscape Ecology*	Female Male	25.29 74.71	130
2	*Biodiversity and Conservation*	Female Male	14.29 85.71	131
3	*Environmental Modelling & Software*	Female Male	17.74 82.26	136
4	*Ecology & Society*	Female Male	38.53 61.47	141
5	*Progress in Human Geography*	Female Male	32.43 67.57	146
6	*Ecosystems*	Female Male	35.29 64.71	148
7	*Global Ecology and Biogeography*	Female Male	38.67 61.33	152
8	*Ecological Modelling*	Female Male	14.58 85.42	156
9	*Biogeography*	Female Male	33.33 66.67	174
10	*Agriculture, Ecosystems & Environment*	Female Male	0 100.00	174
11	*International Journal of Remote Sensing*	Female Male	21.74 78.26	174
12	*Journal of Applied Ecology*	Female Male	41.86 58.14	181
13	*Ecology*	Female Male	49.15 50.85	181
14	*Environment International*	Female Male	29.41 70.59	191
15	*Remote Sensing of Environment*	Female Male	12.50 87.50	281
	Total	Female Male	26.99 73.01	

Table 2. Comparing gender contributions in low-ranking journals.

	Journal Name	Gender (Editors)	Participate Percent	H Index
1	*Environmental Systems Research*	Female Male	20.37 79.63	0
2	*GeoScape*	Female Male	0.00 100.00	3
3	*Landscapes*	Female Male	10.00 90.00	5
4	*Biotropia*	Female Male	36.36 63.64	9
5	*Studies in the History of Gardens & Designed Landscapes*	Female Male	30.00 70.00	9
6	*Geography and Natural Resources*	Female Male	15.63 84.38	11
7	*Landscape Journal*	Female Male	9.09 90.91	11
8	*Landscape Online*	Female Male	44.44 55.56	14
9	*Journal of Resources Development and Management*	Female Male	0.00 100.00	15
10	*Environments*	Female Male	16.25 83.75	20
11	*Geografie*	Female Male	12.90 87.10	23
12	*Land*	Female Male	24.79 75.21	23
13	*Arid Land*	Female Male	18.46 81.54	27
14	*Journal of Transport and Land Use*	Female Male	26.26 73.74	27
15	*Zeitschrift für Geomorphologie*	Female Male	20.00 80.00	34
	Total	Female Male	18.97 81.03	

As Table 2 shows, the contribution in some journals is also 0 percent. The highest-ranked journal was *Remote Sensing of the Environment* with a female contribution of 12.50 percent, and the lowest-ranked journal was *Environmental Systems Research* with a female contribution of 20.37 percent. There are no women on the editorial boards of *Agriculture Ecosystems Environment*, *Journal of Resources Development Management*, or *GeoScape*.

3.4. Gender and Geographical Disparity in Editorial Boards

We also examined the number of journal editorial boards by affiliated country. The results show large differences among countries. Among the affiliated countries, the U.S. has the highest number of female editorial board members with 1128, with a female contribution of 30.05 percent (339/1128) and a male contribution of 69.95 percent (789/1128). The second highest contributing country was Italy, with 555 editorial board members, 28.65 percent female and 69.95 percent male. England was the third-largest country with 425 editorial board members, with 29.41 percent (125,425) female and 70.59 percent (300,425) male (Figure 4).

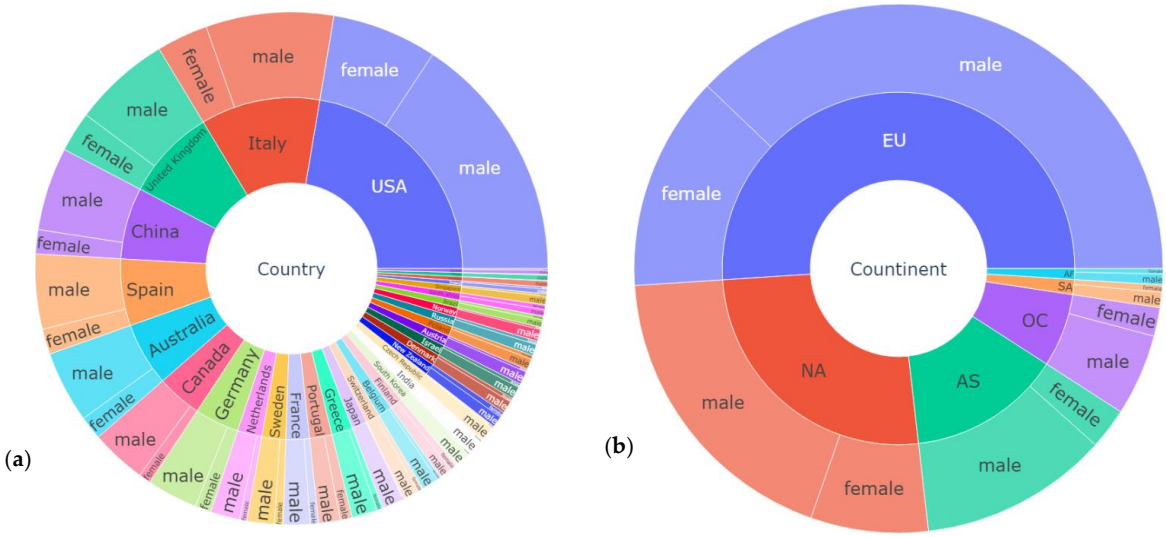

Figure 4. The geographic representation of journal editorial boards by affiliated (**a**) country and (**b**) continent in LS journals.

We examined geographic representation in LS journals throughout the continent. Overall, the editors of the 60 journals on LS were primarily based in Europe, 50.78 percent (25.73 percent women and 74.27 percent men), then in decreasing order: North America with 26.15 percent (28.26 women and 71.74 percent men), Asia with 13.93 percent (17.82 percent women and 82.18 percent men), and Oceania with 6.77 percent (26.14 percent women and 73.86 percent men), and finally Africa 0.98 percent (33.33 women and 66.67 percent men) and Latin America 1.39 percent (31.94 percent women and 68.06 percent men).

3.5. Gender Analysis in Global North and South

The next challenge of this paper was to examine the gender gap in the global North and South. As Figure 5 shows, there is a disparity between the North and the South, with 83 percent of female editorial board members coming from northern countries, while only 12 percent are from the Global South.

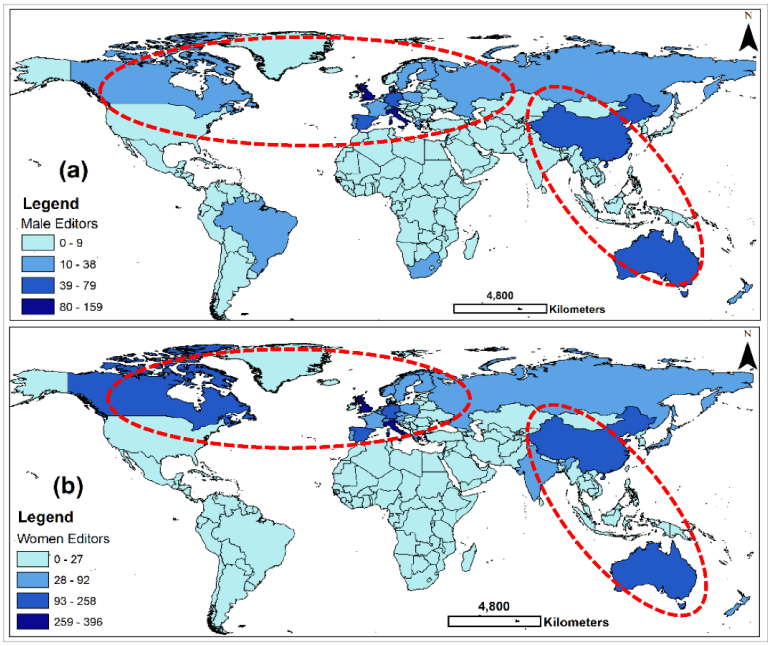

Figure 5. (**a**) shows the geographical distribution of male editorial board members and (**b**) the distribution of female editorial board members.

3.6. Gender Contribution Trends

The last aim of this paper was to investigate the process of gender engagement of editorial members across multiple years. We investigated the gender contribution of 5 LS journals in this regard. According to the data, in 2015, there was no significant difference in editorial membership between men and women, with 42.27 percent of women and 52.73 percent of men contributing. In 2016, this level of participation was 31.54 percent for women and 68.46 percent for men. Figure 6 shows that the trend is returning to equality.

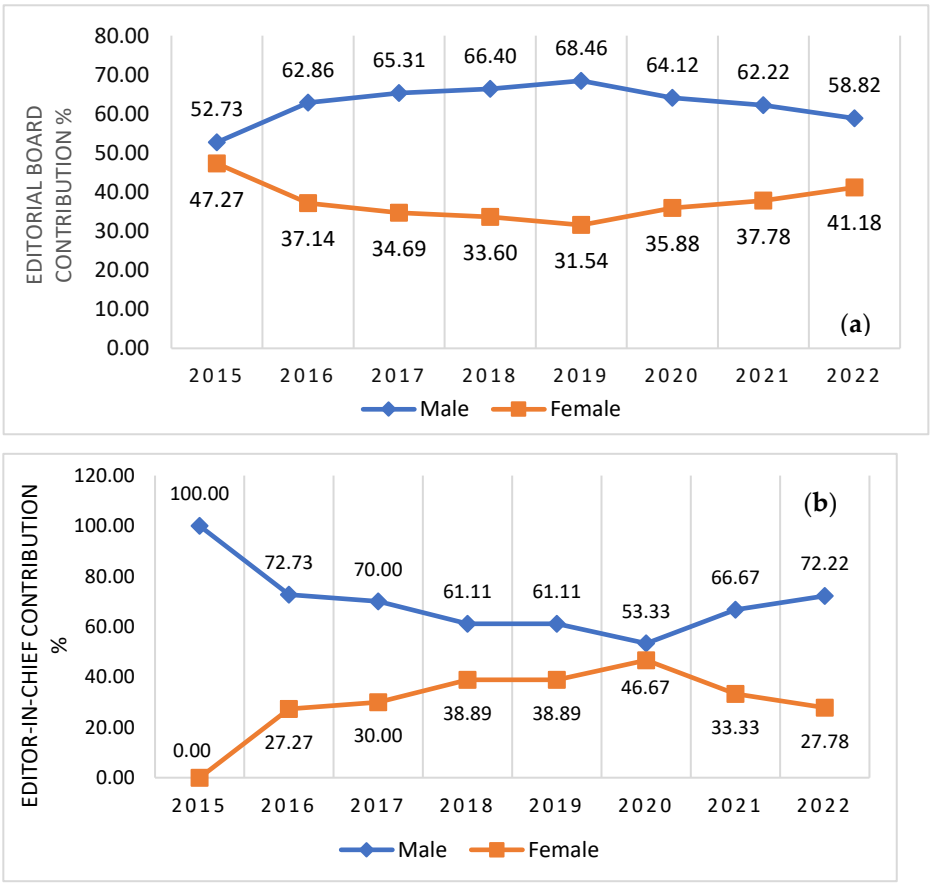

Figure 6. Gender representation on journal editorial boards (**a**) and Editors-in-Chief (**b**) over the last eight years.

As Figure 6 shows, while the gender contribution of editorial board members was nearly equal in 2015, there was a significant discrepancy among members of the Editors-in-Chief board.

4. Discussion

Reports from the past decade indicate that there are significantly more men than women on science editorial boards (see [12,32,33]). Here, we expanded the scope of these inequalities by examining the significant underrepresentation of women on the editorial boards of "land" science journals. Our results suggest that there is substantial gender inequality on the editorial boards of land science journals. Regarding gender representation on the editorial board, we found that there was a large gap between the contributions of women and men to the editorial boards (Figure 1a). We also found the same disparities in the composition of the editors-in-chief. More than 67 percent were men (Figure 1b). We also examined the distribution of gender in all 60 journals. Our findings show that the proportion of female editors is less than one-third in more than 80 percent of the

60 selected journals. This discrepancy was also found among editorial board members (Lobl et al., 2020).

There are also significant differences in the representation of women on editorial boards around the world. Our results show that there is a clear disparity among countries that are members of editorial boards, with more members coming from Europe, North America, and Asia. The same result is also evident in countries in the global North and in countries in the South. A cross-country comparison also showed that Europe, North America, and Oceania have significantly more women on editorial boards [37]. Altman and Chosen's (2021) findings also show that the United States has the largest proportion of editors at 29 percent, and the United Kingdom has the second largest proportion at 8 percent, followed by Italy at 7 percent and China at 7 percent [38]. Predominantly patriarchal societies are more pronounced in many countries of the global South but can still be found in the global North as well [32].

We also wondered what the gender contribution of the editorial board members of the selected journals was over time. The results showed that, the average percentage of female Editors-in-Chief, the most prestigious and influential position within the journals, is quite close to the percentage of female editorial board members in the last year of our study. This result can be interpreted as a sign of the increasing scientific recognition of women in the scientific community. During the time period under consideration, the gender gap in the editorial board has narrowed in most journals, and parity has been achieved in a few. It should be noted, however, that achieving gender parity in fields where women do not comprise at least half of all scientists was not a realistic expectation, as the expected number of female editors in journals depends on the size of the respective female staff.

The editorial board and Editors-in-Chief members are selected at the discretion of the editor-in-chief. Therefore, changes in these areas are directly dependent on the decision of a single individual. As a result, changes in women's participation are quickly felt. However, there are limits to the Editor-in-Chief's ability to achieve greater gender equality, as it is not uncommon for women to decline offers or resign their positions [39]. Fox et al.'s (2017) findings also show that having a female Editor-in-Chief has been shown to be positively related to a higher presence of women on editorial and advisory boards (24.36 percent) and in peer review [40]. Because Editors-in-Chief are often selected from editorial boards or have experience as deputy editors or section leaders, addressing the underrepresentation of women on editorial boards appears to be a priority to promote gender parity at the Editor-in-Chief level [41].

According to the results of other studies, there is a particularly important potential reason for the low representation of women in the editorial boards of LS-it could be the unequal recruitment of women to academic positions, despite the fact that more women have master's and doctoral degrees than men [42]. Studies in six European countries, Belgium, France, Germany, the Netherlands, Spain, and the United Kingdom, have shown a decrease in the number of female and male students at the highest university level, starting with doctoral students and continuing through lecturers, assistant professors, associate professors, and full professors [43]. According to the EU report, women obtain almost 40 percent of all new PhDs (2000). In the natural sciences, their share is highest in life sciences (50 percent), followed by mathematics (30 percent), physics (27 percent), engineering (20 percent), and computer science (19 percent), which we can call a leaky pipeline.

Finally, it is important to point out that the editorial members of the journals play an important role in the dissemination of new ideas, views, and theories in various sciences. The role of an editorial board member is largely one of selection—helping decide which manuscripts will be revised and published [44]. We discovered that male editors hold the majority of editorial positions. As a result, there would be an ideological inconsistency in this journal, and discussions about women's active roles also appear to be led by male editors [12].

Our findings also support previous findings of a substantial gender gap in urban land science [33], the geoscience community [9–11], and biodiversity conservation [12] and veterinary science [37].

5. Recommendations

The gender imbalance in editorial boards also reflects other factors responsible for the lack of women in high positions at LS journals: possible bias during the peer review process, lack of mentors and female role models, and the pervasive male culture in the field. It is also often argued that the scientific community needs to make efforts to promote young female scientists in order to reduce the gender gap. However, the academic system is losing more and more women at each stage of their careers (leaking pipeline), suggesting that focusing on young scientists alone is not enough to reduce the observed career gender imbalance [45]. Figure 7 provides the key recommendations for achieving gender equality in LS: The recommendations span changes at the individual, journal, publisher, and system levels.

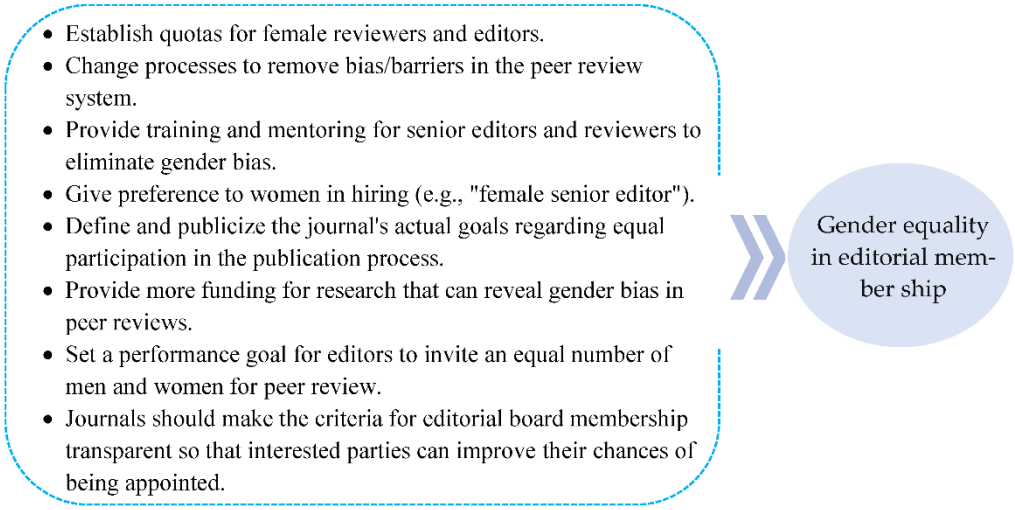

Figure 7. Some recommendations for developing gender equality in editorial membership positions.

6. Research Limitations

In summary, our study complements previous studies that have quantified the gender composition of journal editorial boards in various fields, focusing on the land sciences. There were some limitations that should be considered in future studies.

Not all editors were able to identify 100 percent with their assigned gender (e.g., gender atypical individuals, gender neutral names), although we attempted to account for this problem, which sometimes occurs in programming, in the methodology. However, it is very unrealistic to say that an error cannot occur with large data sets. We also recommend further research on the mechanisms that enable or maintain the gender gap in the academic world of land sciences. It would be interesting to investigate whether the participation of women in different disciplines causes a similar pattern of participation in redactions [37]. Regarding the data collection, unfortunately, we were unable to access the journal's editorial board members' time series data; as a result, we were only able to access five journals' data through email exchanges (We sent emails to all journal offices).

7. Conclusions

This study provides a comprehensive analysis of gender bias in editorial positions in LS journals. Our results show a strong gender bias against female editors, but this bias decreases over time. Affirmative action to recruit and retain female editors could prove useful in reducing gender bias in academic hierarchies and leaking pipelines. However, since most editors are men, urgent action is needed. Journals and institutions need to

support the best science and remove barriers that can impede it, such as gender differences and biases that can affect research outcomes. Land science and practice need ingenious solutions to conservation problems, and a diverse and inclusive scientific community is more innovative and productive. There is still a long way to go before gender equality is achieved, especially in the field of land science. Therefore, the academic community, editors, and journals must take proactive steps to achieve gender balance.

There is still much that can be completed to address the gender imbalance in most editorial boards of land science journals. Monitoring the number of women on management journal editorial boards is just one of the steps needed for successful change. It is critical to regularly track the (under)representation of women on the boards of scientific land science publications to raise awareness and promote positive change. This follow-up study in the area of management, which has been largely ignored until recently, fulfils that goal.

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Conflicts of Interest: The authors declare no conflict of interest.

Appendix A

Table A1. List of Selected 60 LS Journals.

Journal	IF	Country	AC	HI	JIF	JCI
African Journal of Agricultural Research	0.263	Nigeria	o/c	34	n/a	0
Agriculture, Ecosystems & Environment	5.567	Netherlands	o/c	174	1	1.84
Applied Geography	4.24	Netherlands	c	99	1	1.55
Area	2.28	UK	c	82	1	1.07
Biodiversity and Conservation	3.551	Netherlands	c	131	1	0.75
BIOTROPIA	0	Indonesia	o	9	4	0.16
Boreas	2.587	US	c	74	3	0.88
Conservation Letters	8.105	US	o	79	1	2.1
Diversity and Distributions	5.139	UK	o	118	1	1.35
Ecological Modelling	2.974	Netherlands	c	156	2	0.81
Ecology and Society	4.403	Canada	o	141	1	1.06
Ecosystems	4.217	US	c	148	1	1.3
Environment International	4.217	UK	c	191	1	1.3
Environment, Development and Sustainability	0	Netherlands	c/o	56	2	0.6
Environmental Impact Assessment Review	4.549	US	c	92	1	1.2
Environmental Modelling & Software	5.288	Netherlands	c/o	136	1	1.21
Environmental Monitoring and Assessment	2.255	US	o	109	2	0.61
Environmental Science & Policy	5.581	US	c	115	1	1.13
Environmental Systems Research	0	0	0	0	0	0
Environments	0	Switzerland	o	20	3	0.5
Forests	2.634	Switzerland	o	44	1	1.1
Geografie	0.744	Czech	c	23	4	0.31
Geographical Analysis	4.268	US	c	65	1	1.05
Geographical Review	1.582	US	o	44	4	0.65
Geography and Natural Resources	0	US	c	11	4	0.15

Table A1. *Cont.*

Journal	IF	Country	AC	HI	JIF	JCI
GeoScape	0	Poland	o	3	2	0.55
Global Ecology and Biogeography	7.148	UK	c	152	1	1.94
International Journal of Geoinformatics and Geological Science	0	-	*		0	0
International Journal of Remote Sensing	3.151	UK	c/o	174	2	0.75
ISPRS International Journal of Geo-Information	2.899	Switzerland	o	43	2	0.76
Journal of Applied Ecology	6.528	UK	c	181	1	1.71
Journal of Arid Land	2.299	China	c	27	2	0.46
Journal of Biogeography	4.327	UK	c	158	1	1.24
Journal of Ecology	6.256	UK	c	181	1	1.93
Journal of Environmental Planning and Management	2.735	UK	c	68	2	0.86
Journal of Geographical Sciences	3.534	China	c	51	2	0.93
Journal of Land Use Science	2.885	UK	c	35	1	0.71
Journal of Resources Development and Management	0	UK	c	15	4	0.21
Journal of the American Planning Association	2.83	US	c	97	1	1.15
Journal of Transport and Land Use	2.255	US	o	27	1	0.61
Land	3.398	Switzerland	o	23	2	0.78
Land Degradation & Development	4.977	UK	c	81	1	1.15
Land Degradation and Development	4.977	UK	c	81	2	1.15
Land Economics	2.087	UK	c	86	1	0.64
Land Use Law & Zoning Digest	0	UK	c	9	0	0
Land Use Policy	5.398	UK	c	115	1	1.31
Landscape Ecology	3.851	Netherlands	c	130	2	1.07
Landscape Journal		US		11	1	1.43
Landscape Online	0	Germany	o	14	0	0.44
Landscape Research	2.055	UK	c	45	1	0.66
Landscapes	5.398	UK	o	5	2	1.31
Population and Environment	3.537	Netherlands	c	50	1	1.17
Progress in Human Geography	10.21	UK	c	146	1	3.43
Regional Environmental Change	3.67	Germany	c	62	2	0.95
Remote Sensing of Environment	10.14	US	c	281	1	2.34
Studies in Regional Science	0	Japan	o	11	4	0.1
Studies in the History of Gardens & Designed Landscapes	0.1	UK	c	9	2	0.9
Sustainability	3.251	Switzerland	o	85	1	0.56
Zeitschrift für Geomorphologie	0	Germany	c	34	3	0.3
IF	Impact Factor					
AC	Access, Open, Close and C/O					
HI	H-Index					
JIF	Journal citation indicator (JCI) 5 year JIF JCR Quartile					
JCI	Journal Citation Indicator (JCI)					

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