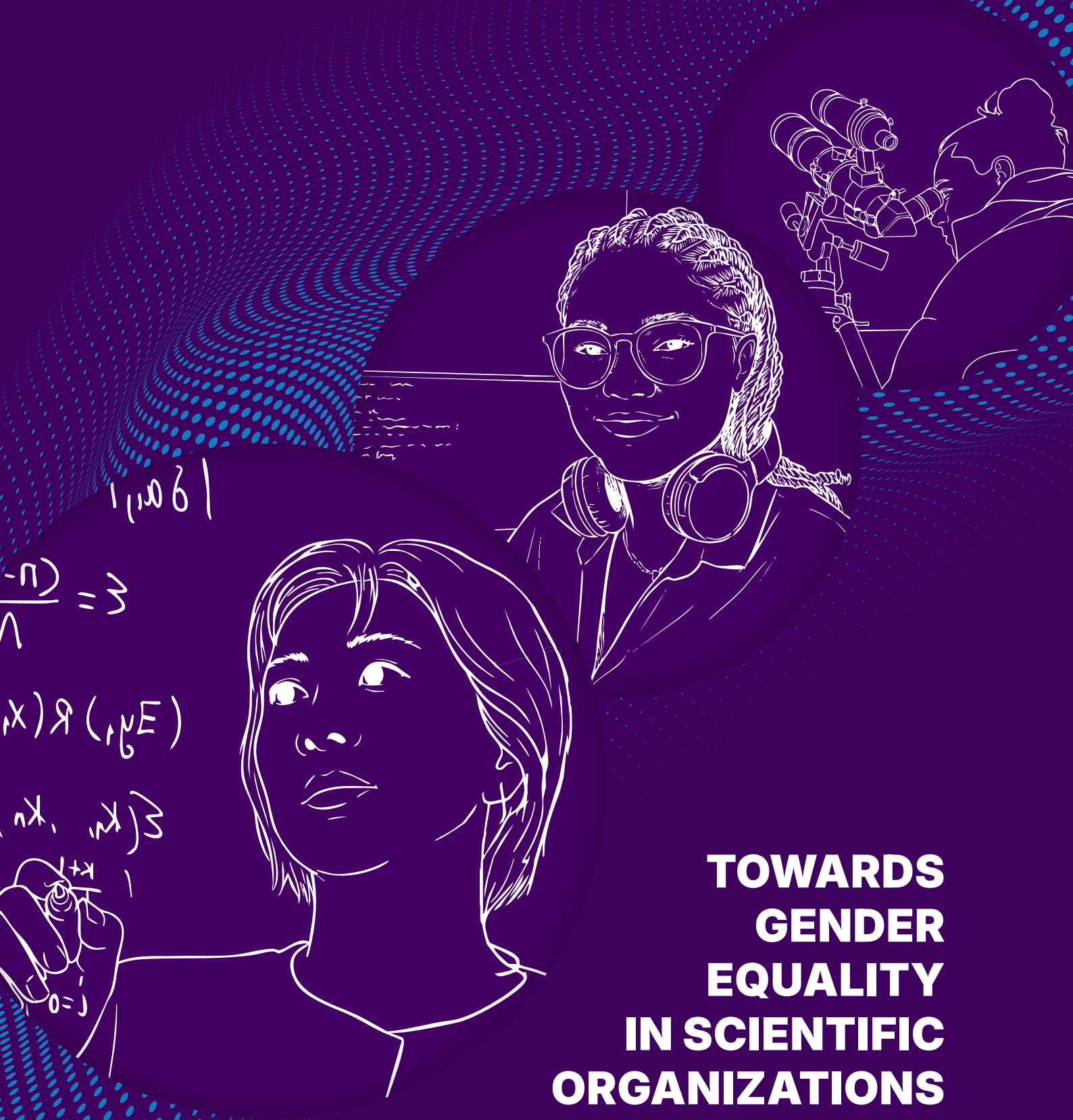

TOWARDS GENDER EQUALITY IN SCIENTIFIC ORGANIZATIONS

ASSESSMENT AND RECOMMENDATIONS

International Science Council
The global voice for science

iap SCIENCE HEALTH POLICY
the interacademy partnership

SCGES Standing Committee for Gender Equality in Science

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Authors: Léa Nacache, Marie-Françoise Roy, Catherine Jami
Reviewers: Mark C. Cesa, Anindita Datta, Roseanne Diab, Miriam Pillar Grossi, Shirley Malcom, Peter McGrath, Lilia Meza Montes, Rita Orji, Palesa Sekhejane, Supawan Tantayanon, Yvonne Underhill-Sem, Tanja van der Lippe, Judith N. Waudo, Carol Woodward
Contributors: Nicky Hayes, Julie Navelier

Project coordinator: Léa Nacache
Project task force: Mark C. Cesa, Peter McGrath, Léa Nacache, Marie-Françoise Roy, Palesa Sekhejane, Supawan Tantayanon, Carol Woodward
Project expert group: Anindita Datta, Roseanne Diab, Gina El-Feky, Miriam Pillar Grossi, Catherine Jami, Shirley Malcom, Lilia Meza Montes, Rita Orji, Yvonne Underhill-Sem, Tanja van der Lippe, Judith N. Waudo
Special consultants: Nelius Boshoff, Liezel de Waal, Katherine Moris, Heidi Prozesky

Design: Mr. Clinton
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About the International Science Council (ISC): The ISC works at the global level to catalyse change by convening scientific expertise, advice and influence on issues of major importance to both science and society. The ISC is an international non-profit organization with a unique global membership that brings together 250 scientific organizations around the world, including international scientific unions and associations, national science academies and research councils, international and regional federations and societies, and academies and associations of young scientists.

About the InterAcademy Partnership (IAP): Under the umbrella of the IAP, about 150 national, regional and global member academies work together to support the vital role of science in seeking evidence-based solutions to the world's most challenging problems. IAP harnesses the expertise of the world's leading scientific minds to advance sound policies, improve public health, promote excellence in science education, and achieve other critical development goals. Its academy members constitute more than 30,000 leading scientists, engineers and health professionals in over 100 countries.

About the Standing Committee for Gender Equality in Science (SCGES): The SCGES is a committee created in 2020 by nine organizations who took part in the project "A Global Approach to the Gender Gap in Mathematical, Computing, and Natural Sciences: How to Measure It, How to Reduce It?". Its partners are 25 international scientific unions sharing the goal of fostering equal opportunity and treatment for women in scientific careers.

IN MEMORIAM: PROFESSOR ROSEANNE DIAB

This report is dedicated to the memory of Prof. Roseanne Diab, a respected scientist, academic leader and advocate for gender equality in science.

Prof. Diab (1949–2026) was a leading atmospheric scientist, internationally recognized for her work on air quality, atmospheric pollution and climate change. She was an Emerita Professor in the School of Environmental Sciences at the University of KwaZulu-Natal, South Africa.

Alongside her scientific contributions, she was deeply committed to advancing gender equality in science and played a prominent role in global initiatives such as GenderInSITE and the Gender Advisory Committee of The World Academy of Sciences. Prof. Diab was instrumental in initiating the first global assessment on gender equality in scientific organizations, led by the Academy of Science of South Africa and the InterAcademy Partnership in 2015. She remained deeply engaged in subsequent efforts, including the 2020 report through her work with GenderInSITE, and was an active member of the expert group contributing to the present study.

Prof. Diab's passing is a profound loss to the global scientific community. Her legacy, as a scientist, mentor and advocate of gender equality, continues to inspire the work reflected in this report.

ACKNOWLEDGEMENTS

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Executive summary

Academies of science, medicine and engineering, as well as international scientific unions, play an important role in shaping scientific agendas and norms, recognizing scientific excellence and advising policy-makers. Through these functions, they strongly influence whose expertise is recognized and whose voices are heard in science. Persistent gender gaps within these organizations – relative to the proportion of women in the scientific workforce – therefore raise questions about the extent to which women scientists can participate, lead and be recognized on equal terms within scientific systems.

This report presents the most comprehensive global assessment to date of gender equality in scientific organizations. It reports the findings of a 2025 global study conducted jointly by the International Science Council (ISC), the InterAcademy Partnership (IAP) and the Standing Committee for Gender Equality in Science (SCGES). Building on global online surveys carried out in 2015 and 2020, this study provides a ten-year perspective on women's representation, participation, leadership and recognition within scientific organizations.

The 2025 analysis draws on institutional data from 136 organizations, survey responses from nearly 600 scientists, and a dozen interviews with representatives of scientific organizations. Together, these sources enable a multi-level assessment of women's representation, participation and leadership in scientific organizations, and allow structural patterns to be examined alongside lived experiences.

KEY FINDINGS

Progress is real but uneven. Despite overall gains since 2015, women remain underrepresented in scientific organizations compared with their share of the global scientific workforce (31.1% of researchers worldwide in 2022).

In national academies, women represent on average 19% of members in 2025, up from 12% in 2015 and 16% in 2020, with proportions ranging from 2% to nearly 40%. The share of academies with very low representation (fewer than 10% women members) has fallen by around half since 2015.

In international scientific unions, women's representation varies primarily by field, reflecting differences in disciplinary pipelines rather than national or institutional contexts. While aggregate figures are not directly comparable to those of academies, unions, particularly those who are SCGES partners, generally report higher levels of women's participation in committees and governing bodies, while facing many of the same challenges as academies, including persistent gaps in senior leadership and recognition.

Formal openness coexists with informal gatekeeping. Gender gaps in representation do not stem from explicit restrictions on women's eligibility. Most scientific organizations report formally open and merit-based procedures. Yet nomination processes driven by existing members, along with reliance on informal networks, continue to shape who is identified, encouraged, and put forward. In most cases, women remain underrepresented in nomination pools relative to their presence in the scientific community. Once nominated, however, women are elected or awarded at rates slightly higher than their share of the nomination pool – indicating that the main constraints operate upstream of formal selection decisions.

Representation does not equate influence. Although women's representation has increased in many organizations, this has not consistently translated into leadership and decision-making roles. Women remain underrepresented in presidential positions and senior governing bodies, indicating that influence within organizations remains unevenly distributed.

Participation is comparable; experiences and opportunities are not. Women who join scientific organizations participate at levels similar to men, but this does not lead to comparable progression or recognition. Women are more than three times as likely to report barriers to advancement, and 4.5 times more likely to miss opportunities due to care responsibilities. Across disciplines and organizational types, women are also 2.5 times more likely than men to report experiences of harassment – and at the same time, they express lower levels of trust in the transparency of selection processes and in the mechanisms for reporting and addressing misconduct.

Gender equality policies and practices are increasingly present, but weakly institutionalized. More than 60% of academies and international unions now report having introduced gender-related policy documents or initiatives aimed at advancing gender equality. However, these efforts are most often limited to awareness-raising or encouragement, and are rarely backed by dedicated structures, financial or human resources, or evaluation mechanisms. As a result, gender equality efforts tend to remain marginal to core governance processes and often rely on the commitment of individual actors rather than sustained institutional engagement.

KEY DATA POINTS

- **Scope of the study:**
  The analysis draws on institutional data from 136 scientific organizations, responses from nearly 600 scientists, and qualitative interviews, providing the most comprehensive global assessment of gender equality in scientific organizations to date.

136
SCIENTIFIC ORGANIZATIONS

600
SCIENTISTS

- **Women's representation in academies:**
  In 2025, women accounted for an average of 19% of members in national academies, up from 12% in 2015 and 16% in 2020. Representation varies widely across academies, ranging from 2% to nearly 40%. The share of academies with extremely low representation (fewer than 10% women members) is also declining, from 34% in 2015 to 21% in 2020 and 19% in 2025.

19%
OF NATIONAL ACADEMY MEMBERS ARE WOMEN

- **Leadership in academies:**
  Only one in five national academies is currently led by a woman. This represents a very limited increase since 2015 and no progress at all over the past five years. Nearly half of academies report no women in vice-president or co-chair roles.

1 IN 5
NATIONAL ACADEMIES IS LED BY A WOMAN

- **International scientific unions:**
  Women's representation in unions varies strongly by discipline. In governing bodies, women hold on average 40% of leadership positions, with a marked increase among unions that are members of the SCGES. Among unions participating in both 2020 and 2025, women's representation in governance rose from 32% to 46% on average.

40%
OF UNION LEADERS ARE WOMEN

- **Policies, practices and institutionalization:** Overall, 62% of academies and 64% of unions report having gender-related policy documents, while 52% of academies and 69% of unions report having taken initiatives to promote gender equality. However, fewer than 10% of academies and only 30% of unions report having a dedicated budget for gender equality, and systematic evaluation of these measures remains an exception.

NUMEROUS INITIATIVES BUT LACK OF COMPARATIVE FUNDING

- **Barriers to participation and progression:** Women are three times more likely than men to report barriers to participation, progression or recognition within scientific organizations, a pattern observed across all disciplines and organization types.

3x MORE LIKELY THAN MEN

- **Care responsibilities and missed opportunities:** Women are approximately 4.5 times more likely than men to report missing opportunities due to caregiving responsibilities.

4.5x MORE LIKELY THAN MEN

- **Gendered experiences at scientific events:** Women are six times more likely than men to experience gender-based differences that affect their experience and participation.

6x MORE LIKELY THAN MEN

- **Discrimination and harassment:** Women are 2.5 times more likely than men to report experiences of discrimination or harassment within scientific organizations and report lower confidence in organizational mechanisms for addressing misconduct.

2.5x MORE LIKELY THAN MEN

Key definitions

Gender balance: Gender balance describes situations in which the proportion of women and men falls between 40% and 60%.

Gender bias: Gender bias refers to conscious or unconscious attitudes, stereotypes or assumptions attributed to individuals based on their gender, which can influence decision-making, evaluation and access to opportunities.

Gender equality in science: In this report, gender equality refers to equal levels of participation, leadership and recognition within scientific organizations. The analysis focuses on gender equality because it can be measured using available and comparable data across institutions and over time. The findings presented in this report therefore reflect observable patterns in representation, participation and recognition within scientific organizations.

Gender gap: Gender gap refers to differences between women and men as reflected in social, political, intellectual, cultural, scientific and economic outcomes. In this report, the term is used to describe observed differences in representation, participation or recognition within scientific organizations.

Participation: Participation refers to the extent to which women and men are involved in the activities of scientific organizations, including decision-making processes, committees, leadership roles and organizational initiatives.

Recognition: Recognition refers to the extent to which individuals' scientific contributions, service and leadership are acknowledged, valued and rewarded within scientific organizations, through both formal mechanisms (such as awards, nominations, elections and appointments) and informal processes of visibility and endorsement.

Representation: Representation refers to the proportion of women and men within an organization, body or process (e.g. membership, governing bodies, committees), relative to each other and, where relevant, to their presence in the broader scientific community.

Scientific organizations: Scientific organizations play an important role in shaping scientific careers, governance, recognition and disciplinary norms at national and international levels. In this report, they refer primarily to national academies of science, medicine and engineering, as well as international scientific unions.

Underrepresentation: Underrepresentation refers to a situation in which a group's proportion within a given context (e.g. an organization, discipline, career stage or decision-making body) is lower than its proportion in the relevant reference population, such as the scientific workforce overall or the eligible pool for that context.

Introduction

Over the past two decades, data at the global and national levels have consistently revealed a disconnect between women's growing participation in higher education and their representation in scientific careers or leadership positions. Young women are now slightly more likely than young men to enrol in higher education globally (46% compared to 40%). Yet women represented only 31.1% of the global scientific workforce in 2022, up only marginally from 29.4% in 2012.

Detailed insights into how gender inequalities are structured, across disciplines and career stages, are available primarily at the European level. In the absence of comparable global datasets, these data are referenced here as the most recent and comprehensive source. However, they should not be interpreted as representative of institutional dynamics beyond Europe, nor assumed to apply to other regional contexts.

According to the European Commission, as of 2024, women represented about half of doctoral graduates in the European Union (48%), taking into account all disciplines. Yet this near-parity at the doctoral level is very different from the situation in the scientific workforce, as women accounted for roughly one third of scientists in the EU (34%). In Europe, strong disciplinary segregation remains. While gender balance has largely been achieved in the social sciences and humanities, women continue to be underrepresented in the natural sciences (around one third) and particularly in engineering and technology (one quarter or less).

These disparities intensify at senior levels. In 2024, across the EU, women held approximately one quarter of positions as heads of higher education institutions (26%), an increase of just two percentage points since 2019. Similar patterns are observed in academic careers: even in disciplines where women are well represented earlier in the pipeline, they remain significantly less likely to reach the highest academic ranks. Across all fields, women account for only around one third of full professorship (Grade A) positions.

These European patterns point to a persistent disconnect between women's growing presence in education and early scientific careers, and their access to senior positions in science. This pattern reflects the well-documented "leaky pipeline" phenomenon, in which women's representation declines at successive stages of the scientific career path – despite relatively high levels of participation in higher education in many regions and disciplines. As careers progress, women become progressively underrepresented in senior positions, even where entry-level participation is strong.

Scientific academies and international scientific unions play an important role in shaping scientific agendas and norms, recognizing scientific excellence, and advising policy-makers. Through these functions, they strongly influence whose expertise is visible and whose voices shape science, yet have remained comparatively under-examined at the global level.

This report presents the most comprehensive global assessment to date of women's representation, participation, and recognition in scientific organizations. It shares the findings of a 2025 global study jointly conducted by the International Science Council (ISC), the InterAcademy Partnership (IAP), and the Standing Committee for Gender Equality in Science (SCGES).

The study expands on earlier efforts conducted in 2015 and 2020 and introduces a qualitative dimension for the first time. Using a mixed-methods approach, it integrates institutional data from 136 academies and international scientific unions affiliated with ISC,

IAP, and SCGES, alongside survey responses from nearly 600 scientists worldwide, and qualitative insights from a dozen targeted interviews with organizational leaders.
This approach enables both the tracking of changes in representation over time and a deeper analysis of the structures, policies, and lived experiences that shape – or hinder –progress towards gender equality in science.

The key findings, insights, and recommendations presented in this report were identified by an expert group of scientists representing a wide range of regions and disciplines. The conclusions are based on evidence from both the institutional and individual surveys, which were analyzed by external data consultants. Case studies of good practice, featured in the Results sections, were drawn from a dozen interviews with representatives of academies and international scientific unions.

HOW TO READ THIS REPORT

This report is designed to support reflection, collaboration and decision-making by scientific organizations. Following a methodological introduction, it opens with a synthesis of key findings and analytical insights, highlighting high-level patterns that shape women's access, participation, leadership and recognition across academies and international scientific unions. These insights inform a set of evidence-based recommendations that suggest practical areas for organizational action.

Detailed empirical results from the institutional and individual surveys are presented in subsequent result sections and underpin the analytical synthesis. Readers are encouraged to navigate between the synthesis, results and recommendations according to their roles, responsibilities and interests.

Methodology

Building on the 2015 and 2020 survey rounds, as well as the Gender Gap in Science project and annual reporting by the SCGES, the 2025 study updates longitudinal baselines and extends the analytical framework through the integration of institutional, individual-level and qualitative data.

The study is based on three complementary components:

- an institutional survey administered to scientific organizations within the memberships of the ISC, IAP and SCGES;
- an individual survey of scientists; and
- targeted interviews with representatives of academies and international scientific unions.

The full survey instruments are provided in the annexes.

INSTITUTIONAL SURVEYS

Scientific academies and international scientific unions differ substantially in their mandates, roles, objectives, governance structures, membership models and modes of participation. To reflect these differences and ensure analytical relevance, the study used two parallel institutional surveys. While the surveys shared a set of core sections to allow comparison across institution types, each also included tailored modules addressing structures, practices and decision-making processes specific to academies and to unions.

Responding directly to a recommendation made in the 2020 report, the institutional questionnaire did not only focus on numbers, but examined organizational policies, structures and practices relevant to gender equality. It covered membership, governance, decision-making processes, and mechanisms for recognition and accountability, and included open-ended questions inviting institutions to reflect on challenges in advancing gender equality.

In total, 193 institutional survey submissions were received. Following data cleaning and validation, 136 submissions were included in the analysis. As participation was voluntary, the sample is not representative of all academies and international unions globally, and findings should be interpreted as indicative of high-level patterns among participating institutions.

Academies survey

The academies survey examined women's representation and participation across national, young, global, medical and engineering academies. It builds on the 2020 questionnaire, which was revised and expanded by a task force comprising representatives of the ISC, IAP and SCGES, with support from external data experts.

A total of 109 submissions were received from academies, of which 70 were retained for analysis after data validation. These came from a pool of 149 academies within the ISC and IAP memberships. Most of the validated submissions came from national academies (n=53), with smaller numbers from young national academies (n=5), regional academies (n=5), and young regional academies (n=3).

While the survey was designed to support comparisons across the three rounds, longitudinal analysis was constrained by variations in participation and by differences in questionnaire content across editions. To ensure comparability over time, trend analyses are therefore limited to the 21 academies that participated in all three survey rounds (2015, 2020 and

2025). These analyses are intended to illustrate directional changes within a consistent subset of institutions, rather than to provide representative global trends.

International unions survey

The survey targeting international scientific unions was distributed to ISC and SCGES member organizations. A total of 84 responses were received, of which 39 international scientific unions were retained for analysis, representing approximately half of the unions within the ISC and SCGES membership. Although responses were also received from other categories of scientific organizations, the analysis focuses on international scientific unions and comparable scientific associations. Submissions from research-oriented organizations, universities and ministries were excluded due to small and heterogeneous sub-samples that would not support robust analysis.

The questionnaire builds on the 2020 survey and two SCGES surveys conducted in 2023 and 2024, and was developed by the task force with support from the same external data experts. It examined governance structures and organizational practices related to gender equality and included open-ended questions on initiatives and challenges. Here again, longitudinal comparisons were limited and focused on the 15 unions that participated in both the 2020 and 2025 surveys, of which 13 are SCGES partner unions.

SCGES partner unions contribute to annual reporting on gender equality within their organizations, participate in webinars that address specific aspects of gender equality in science, exchange best practices for promoting gender equality within the disciplines they represent, and engage in twice-yearly meetings to discuss approaches to advancing gender equality across disciplines. To provide insight into the potential impact of sustained engagement in such a coordination mechanism, comparisons are made between SCGES partner unions and other unions on several outcomes.

INDIVIDUAL (SCIENTIST-LEVEL) SURVEY

Introduced in the 2025 edition, the individual survey captures scientists' experiences of participation, inclusion and progression within scientific organizations at national and international levels. It complements the institutional surveys by providing individual-level insights on access, recognition and organizational culture, gathering experiences of benefits and opportunities but also exclusion, discrimination and harassment.

The survey targeted scientists who are members of, or actively engaged in, scientific organizations. Out of 811 submissions received, a total of 598 responses were retained for analysis based on data completeness and reliability. Within this analytical sample, women represented 59.4% of respondents (n = 355) and men 40.6% (n = 243), spanning diverse disciplines, career stages and regions. For a detailed breakdown of the sample, see the Results section.

Quantitative analyses examined gender differences across key outcomes, with statistically significant results reported explicitly. Open-ended responses were analysed thematically to contextualize and deepen the interpretation of quantitative findings by a specialized firm.

As participation was voluntary, findings should be interpreted as indicative of high-level patterns among respondents rather than as representative of the global scientific workforce.

INTERVIEWS

A dozen interviews were conducted to deepen and contextualize some responses from the institutional surveys. They focused on organizations that reported the implementation of gender equality initiatives or showed significant progress over time, with the aim of understanding the practices, policies and processes underlying this progress. The interviews informed the development of case studies of good practices that are integrated in the Results section of this report.

SCOPE AND LIMITATIONS

Several limitations should be considered when interpreting the findings.

- **Survey design and participation:** Participation across all survey components was voluntary, and respondents were not required to answer every question, in line with the project's ethical guidelines. As a result, completion rates vary across sections, particularly towards the end of the survey. Reported percentages therefore refer only to the respondents who answered a given question, which limits direct comparison across indicators. In addition, when the data are broken down by organization type, region, discipline or specific practices, the number of responses in each subgroup is sometimes too small for detailed statistical analysis.
- **Data availability:** Many organizations do not systematically collect or report gender-disaggregated data. These gaps limit the depth of the analysis and highlight a broader structural challenge: without consistent gender-disaggregated data, progress on gender equality cannot be effectively monitored or the situation fully assessed.
- **Geographical analysis:** For national academies, responses are unevenly distributed across regions, with some parts of the world more strongly represented than others. In addition, even in regions where responses were received from multiple countries, the diversity of national contexts limits the interpretability of aggregated regional trends. Together, uneven coverage and high intra-regional heterogeneity reduce the possibility of relevant regionally disaggregated analyses.
- **Interpretative scope:** International scientific unions and academies operate under different institutional models. For this reason, the analysis does not seek to compare organization types or evaluate individual institutions. Instead, it focuses on identifying high-level patterns across diverse organizational contexts. Differences observed across disciplines should likewise be understood as reflecting structural characteristics of scientific fields, rather than the actions of specific institutions.

Key findings & insights

The findings presented in this report highlight both progress and persistent disparities in the representation, participation and recognition of women in scientific organizations. The analysis focuses on high-level institutional and individual dynamics observed across organizations, drawing on both institutional data and individual experiences, and situating these patterns within diverse organizational models and mandates. The patterns discussed should be understood as shared high-level trends across a heterogeneous landscape, rather than assessments of national contexts or disciplines.

On average, women's representation in scientific organizations has increased over the past decade, and extreme cases of underrepresentation (< 10% of members) are becoming less common: from 34% in 2015 to 21% in 2020 and 19% in 2025. Another positive trend is that over 60% of academies and unions report policies, committees or initiatives intended to advance gender equality. Still, improvements in overall representation coexist with persistent gaps in participation, leadership or recognition. Gains at one level do not automatically translate into change at others, and progress remains highly uneven across organizations and disciplines.

A central issue underlined by the data concerns how scientific excellence is defined, identified and validated. Both women and men endorse the idea that scientific contributions should be based on merit. However, it is apparent that gender bias continues to shape whose contributions are noticed, valued and attributed, not only through individual judgments but also through institutional processes of nomination, evaluation and election. When these processes systematically privilege particular forms of visibility, career trajectories and metrics-heavy indicators of excellence, they contribute to the persistent underestimation, misattribution and sometimes erasure of women's scientific contributions.

Women's representation in scientific academies has continued to increase globally, but unevenly. **In 2025, women accounted for an average of 19% of national academy members, compared to 12% in 2015 and 16% in 2020, reflecting steady but modest progress over the past decade.** Part of this lag can be attributed to the design of most academies. Long membership cycles mean that changes in the composition of the scientific workforce are reflected only gradually in academy membership. Even when women's participation increases in the wider scientific community, these gains typically take years to translate into changes in memberships.

However, low representation should not be understood solely as a legacy issue that will resolve itself over time. It is sustained by institutional practices that favour network-based visibility and metric-driven indicators of scientific excellence and embedded in evaluation cultures historically developed within men-dominated scientific communities. At present, most systems continue to recognize and reward career trajectories characterized by uninterrupted progression, early and sustained visibility, and access to influential networks. These criteria systematically disadvantage scientists with non-linear career paths shaped by interruptions or constraints linked to caregiving responsibilities, limited mobility, uneven access to resources or other structural factors, many of which disproportionately affect women. **These dynamics are not inevitable**: the case studies featured in this report demonstrate that such structural limitations can be addressed through deliberate institutional change, leading to more balanced representation.

Across most academies and international scientific unions, women remain underrepresented among nominated and elected members and leadership roles relative to their overall numbers in the scientific community. However, once nominated, it appears that women are elected or awarded at average rates that are proportionally slightly higher than their share

among nominees. This pattern suggests that **the primary barrier lies earlier in the process, in the composition of nomination pools, which are shaped by whom and how candidates are identified, encouraged and nominated, rather than in selection decisions themselves**.

Compared to academies, international scientific unions demonstrate stronger engagement with gender equality policies and higher participation of women, with figures that more closely align with the proportion of women in the scientific workforce, albeit with substantial variation across disciplines. This pattern may be partly explained by initiatives undertaken by unions in recent years to increase women's representation in governing bodies, including actions associated with the establishment and advocacy work of the SCGES.

FORMAL OPENNESS AND INFORMAL GATEKEEPING

Formal rules governing access and participation coexist with informal norms and practices that shape who is encouraged, made visible and considered legitimate, thereby reproducing unequal opportunities despite formally open procedures.

Within academies, nomination remains largely driven by existing members: 90% of academies use member-led nomination processes, and over half rely on this approach exclusively. Most academies (77%) elect new members by a vote of all members – a process associated with lower overall representation of women (17% on average, range 4%–39%). In contrast, academies that use dedicated committees for elections report significantly higher representation of women (34% on average, range 9%–57%). These differences suggest that more structured and targeted approaches – especially those that shift decision-making away from large, informal voting bodies – may support more equitable outcomes.

Simply adding new nomination channels or increasing procedural transparency does not appear to be enough. Organizations that reported implementing measures such as self-nomination, external nomination, or clearer communication of selection criteria showed no significant difference in the proportion of women members compared to those that did not. **This suggests that formal openness, while important, has limited impact when nomination remains embedded in informal networks or when prevailing norms continue to shape who is seen as a legitimate candidate.** Meaningful change appears to depend less on the number of procedural options available and more on transforming the underlying structures of visibility and endorsement.

These structural findings are echoed in individual experiences. While institutional procedures are widely perceived as open, findings from the individual survey indicate that access is still shaped by deeper informal dynamics. **Entry into scientific organizations is strongly shaped by informal encouragement and support by mentors, which women value significantly more than men when deciding whether to pursue participation.** Encouragement appears to play a crucial role in access to scientific organizations for both women and men, with broadly similar proportions reporting having been encouraged to join (75% of men and 80% of women). However, women were more likely than men to rate this support as "very important" (44%) or "essential" (23%), whereas men most frequently rated it as "moderately

important" (34%) – suggesting that informal support networks may play a more decisive role in facilitating access and progression for women.

For both genders, encouragement most commonly comes from mentors who are men: 74% of men and 58% of women report being encouraged by men, reflecting the predominance of men in senior membership, leadership and influential networks. At the same time, women are more likely than men to report encouragement from other women (39% compared to 21%), highlighting the growing role of women as mentors and women's networks in supporting women's entry into scientific organizations.

Perceptions of transparency further illuminate these informal dynamics. Confidence in the transparency of selection and nomination processes remains moderate overall, with 56% of women and 66% of men perceiving these processes as transparent. While both women and men express doubts about transparency, women consistently report lower perceived transparency across disciplines, with the largest gap in the social sciences and humanities (62% versus 81%) and smaller, though persistent, gaps in the natural and engineering sciences (52% versus 61%) and in the health, medical, agricultural and veterinary sciences (69% versus 81%).

CUMULATIVE DISADVANTAGE ACROSS PARTICIPATION, LEADERSHIP AND RECOGNITION

Once they join scientific organizations, women participate at levels comparable to men yet they experience unequal conditions of progression over time. Leadership and recognition outcomes largely reflect existing gaps in membership composition, while individual-level evidence highlights persistent barriers linked to care responsibilities, discrimination and exposure to harassment.

Within scientific organizations, both men and women report similar levels of participation. Women who join are as actively engaged as men in committees, working groups and other organizational activities, and no significant gender differences are observed in time commitments or compensation patterns. **However, comparable levels of participation do not translate into equal access to opportunities or recognition.**

As leadership positions are drawn primarily from membership pools, gender imbalances at the membership level tend to be reproduced in governance structures over time. Women's access to leadership varies markedly by organizational context. Based on responses to the individual survey, women's representation in leadership is highest in international scientific unions or disciplinary federations (around 50%) and lowest in national academies (around 14%), suggesting that organizational models and governance arrangements matter at least as much as disciplinary composition.

Institutional survey data provide a complementary perspective. On average, women hold 40% of leadership positions across surveyed international unions. Within national academies, the share of academies led by women has increased modestly across successive survey

rounds, reaching just over one fifth in 2025. However, women remain underrepresented in senior and executive roles, with nearly half of academies reporting no women serving as vice-presidents or co-chairs.

Importantly, women's presence in top leadership positions does not appear to translate automatically into broader gender balance within organizational structures: no statistically significant relationship was found between the gender of the president and women's representation at senior levels of governance in academies. **Progress in leadership therefore remains uneven, and changes at the top of governance are unlikely to reshape organizational power structures in the absence of broader shifts in institutional practices and membership composition.**

Across other forms of scientific recognition surveyed, including awards and prizes and participation in general assemblies and scientific congresses, women remain a minority. In academies, women most commonly account for one fifth to one third of scientific prize nominees, while in unions their share is on average below 30%. These proportions are, on average, lower than women's estimated share in the global scientific workforce. However, interpretation of these figures requires caution. Awards and prizes are not limited to organization members, and the gender composition of the broader eligible scientific population is not systematically documented, particularly at the disciplinary level. As a result, it is not always possible to assess whether observed award outcomes are proportional to the relevant candidate pools.

At the same time, existing research consistently documents persistent gender disparities in scientific recognition. A 2024 meta-analysis conducted by the University of Birmingham, covering 8,747 recipients of 345 scientific awards and medals, found that women accounted for only 15.4% of recipients. This pattern is particularly reflected in the most prestigious scientific awards. By way of illustration, women have been awarded the Fields Medal in mathematics only twice (out of 64 awards), and in computer science have received the Turing Award on just three occasions (out of 79), representing less than 3.5% of recipients of both awards. Similarly, Nobel Prizes have overwhelmingly been awarded to men: among individual laureates, 64 have been women, compared with 894 men.

The analysis of women's participation in highly visible collective forums, such as general assemblies and scientific congresses, shows mixed patterns. In academies, women's participation in general assemblies broadly reflects their share of membership, most commonly ranging between 10% and 39% of delegates. However, only five academies reported balanced representation (40% or more), and just 25% applied guidelines or targets to promote more balanced participation.

Available data from international scientific unions similarly indicate participation levels most often between 30% and 39%, though reporting is limited: of the 35 unions organizing general assemblies, only nine provided gender-disaggregated data, and only 12 reported

applying guidelines or targets. Data on scientific congresses were available for about half of unions and showed broadly comparable levels of women's participation across roles, attendees, invited speakers and organizing committees, typically between 36% and 38%. Taken together, these data limitations warrant cautious interpretation and underscore the need for more systematic data collection to better assess cumulative dynamics across participation, recognition and leadership.

Evidence from the individual survey helps to address some of these limitations, with individual responses pointing to unequal conditions of progression over time**. In the scientists' responses, women were three times more likely than men to report barriers to their full participation and advancement.** In their responses, gendered patterns are particularly evident in missed opportunities linked to care responsibilities – where **women were approximately 4.5 times more likely than men to report having missed an opportunity due to care-related constraints.** At events hosted by scientific organizations, **women are six times more likely than men to experience gender-related impacts that shape their experience and limit their participation.**

Women also express lower confidence in organizational mechanisms for reporting misconduct, a concern compounded by the fact that **they are approximately 2.5 times more likely than men to report experiences of harassment.** Confidence in mechanisms to report misconduct is limited overall, with just over half of respondents expressing trust in existing procedures. Women report lower confidence than men (45% versus 59%) and are more likely to indicate uncertainty about whether such mechanisms exist (20% versus 12%), suggesting gaps in awareness and trust.

Taken together, these findings point to cumulative disadvantages that arise less from formal institutional exclusion at specific stages than from unequal conditions of participation and progression within scientific organizations. Addressing these dynamics therefore requires attention not only to nomination and selection processes, but also to the organizational conditions that shape who is able to participate and benefit from opportunities within these structures.

POLICIES AND INSTITUTIONALIZATION

Where commitments to gender equality are weakly institutionalized – reflected in limited mandates, resources, data or accountability mechanisms – policies and practices tend to have limited operational effect and are unlikely to produce sustained organizational change.

An increasing number of academies and unions report having statements or policies aimed at promoting gender equality, reflecting growing awareness and engagement with the issue. Overall, 62% of academies and 64% of unions report having gender-related policy documents, while 52% of academies and 69% of unions report having taken initiatives to promote gender equality. However, comparative analysis found no clear correlation between the existence of such statements and initiatives and higher levels of women's representation. This does not imply that policy statements or initiatives taken are ineffective in principle, but rather, might indicate that most remain limited in scope, recent in implementation or insufficiently embedded in organizational priorities.

Existing gender equality efforts are also rarely supported by dedicated resources or institutionalized mechanisms. Only 30% of unions and fewer than 10% of academies report having a dedicated budget for gender equality, while a majority of academies (64%) and unions (61%) report having no permanent structures in place to advance gender equality. Survey data and interviews seem to indicate that responsibility for implementation often rests with a small number of committed individuals rather than being embedded in core organizational processes. As a result, progress depends heavily on the individuals' leadership and is vulnerable to shifts in capacities, priorities or personnel.

This weak institutionalization is also evident in organizational governance. Many organizations lack formal grievance mechanisms and clearly defined accountability structures. Data collection on gender equality remains weak and inconsistent, and systematic evaluation of existing measures is rare. As a result, gender equality is often treated as a peripheral concern, often addressed through ad hoc initiatives rather than embedded in core governance and accountability systems.

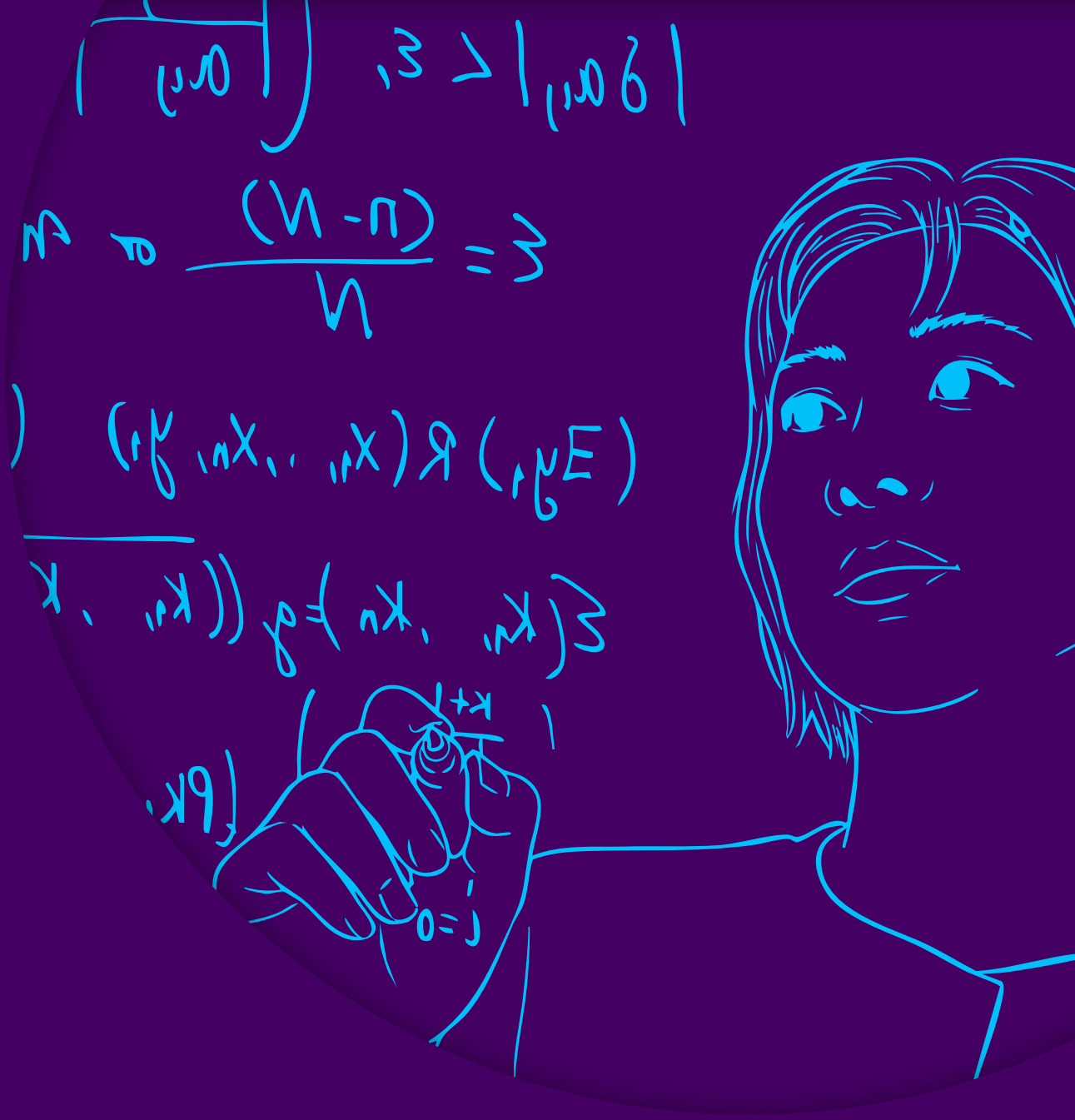
ORGANIZATIONAL DIVERSITY AND SHARED CONSTRAINTS

Gender equality levels within scientific organizations are shaped by different institutional mandates, governance models and broader systemic gaps within scientific disciplines. Yet despite these differences, progress across both academies and unions is constrained by shared structural challenges.

International scientific unions generally show stronger engagement with gender equality policies and practices than academies and, on average, somewhat higher representation of women in leadership. Unlike academies, most international scientific unions do not have individual members and therefore do not rely on nomination or election processes based on personal membership; governance roles are typically filled by representatives nominated by member organizations. This structure allows greater flexibility and opportunities for experimentation, and participation in SCGES is associated with differences in how gender equality issues are addressed within unions. At the same time, unions face many of the same constraints observed in academies, including limited resources, uneven collection of gender-disaggregated data, and weak monitoring and evaluation.

These findings point to structural drivers of gender inequality that transcend organizational form. Across scientific organizations, inequalities appear to be sustained less by formal exclusion than by institutional inertia.

Addressing these dynamics requires sustained and institutionalized action. Systematic data collection and monitoring are prerequisites for establishing durable operational structures, while institutional strategies and action plans are necessary to support progress. The recommendations that follow are informed by this analysis and focus on areas where changes to formal rules and institutional practices may support more equitable participation, leadership and recognition.



Recommendations

The following recommendations are grounded in the evidence presented in this report and focus on areas where scientific organizations have direct responsibility and capacity to act. They are designed to be feasible for organizations of different sizes and structures, and to support lasting structural change. Some have proven effective in several academies and international unions that have implemented them.

Recommendations are grouped under seven headings categorized by purpose: the first five address key barriers identified, while the final two focus on tools to improve monitoring, assessment and the sharing of good practices.

Organizations are invited to identify the recommendations that are most relevant and urgent in their own contexts, as well as those where they are well placed to lead by example. Organizations interested in collaborative implementation or peer support are encouraged to contact the project's partner organizations to explore next steps. The ISC, IAP and SCGES will also review their internal policies and practices in line with these recommendations, and will engage their members to support broader uptake.

1. INSTITUTIONALIZING GENDER EQUALITY

- Make explicit in the organization's statutes a commitment to gender equality.
- Develop and implement a gender equality and diversity plan with clear and ambitious objectives.
- Establish a dedicated committee or designate an officer with a well-defined mandate and the resources required to carry it out. Publish activity reports at regular intervals.
- Assign responsibility for gender equality outcomes to governing bodies and include progress reporting as part of regular organizational reviews.
- Provide recurring funding to support gender equality activities.

2. IMPROVING NOMINATION, SELECTION, ELECTION AND RECOGNITION PROCEDURES

- Define transparent rules and criteria and publish eligibility requirements.
- Ensure that candidate and nominee lists are gender balanced.
- Set up diverse nomination and election committees, renewed at regular intervals, and train their members in recognizing and mitigating bias.
- Ensure that committee decisions related to nominations, elections, and awards are documented and, where appropriate, communicated to nominees and relevant stakeholders to increase transparency.
- Monitor gender distribution at each stage of nomination, selection and election processes to identify issues and adjust procedures accordingly.

3. CREATING SAFE AND RESPECTFUL ENVIRONMENTS

- Issue a clearly articulated and precise code of conduct, with defined and enforced consequences in case of transgressions.
- Train governance and committee members, as well as staff, to recognize and address misconduct.
- Provide confidential and independent reporting channels, supported by clear procedures for follow-up and protection from retaliation.
- Ensure that these rulings and channels, and the process for using them, are clearly communicated and easily accessible to all members and staff.
-

4. MAKING PARTICIPATION IN EVENTS ACCESSIBLE TO WOMEN AND CAREGIVERS

- Develop a toolkit for conference organizers, including guidelines for improving the representation of women and reaching gender balance among plenary and invited speakers as well as session chairs. Ask conference organizers to monitor and report on these matters.
- Provide targeted financial support and on-site solutions to meet care-related needs during events.
- Whenever possible, organize events remotely or in hybrid format and adopt inclusive scheduling practices to broaden participation.

5. DEVELOPING AN INCLUSIVE ORGANIZATIONAL CULTURE AND LEADERSHIP PATHWAYS

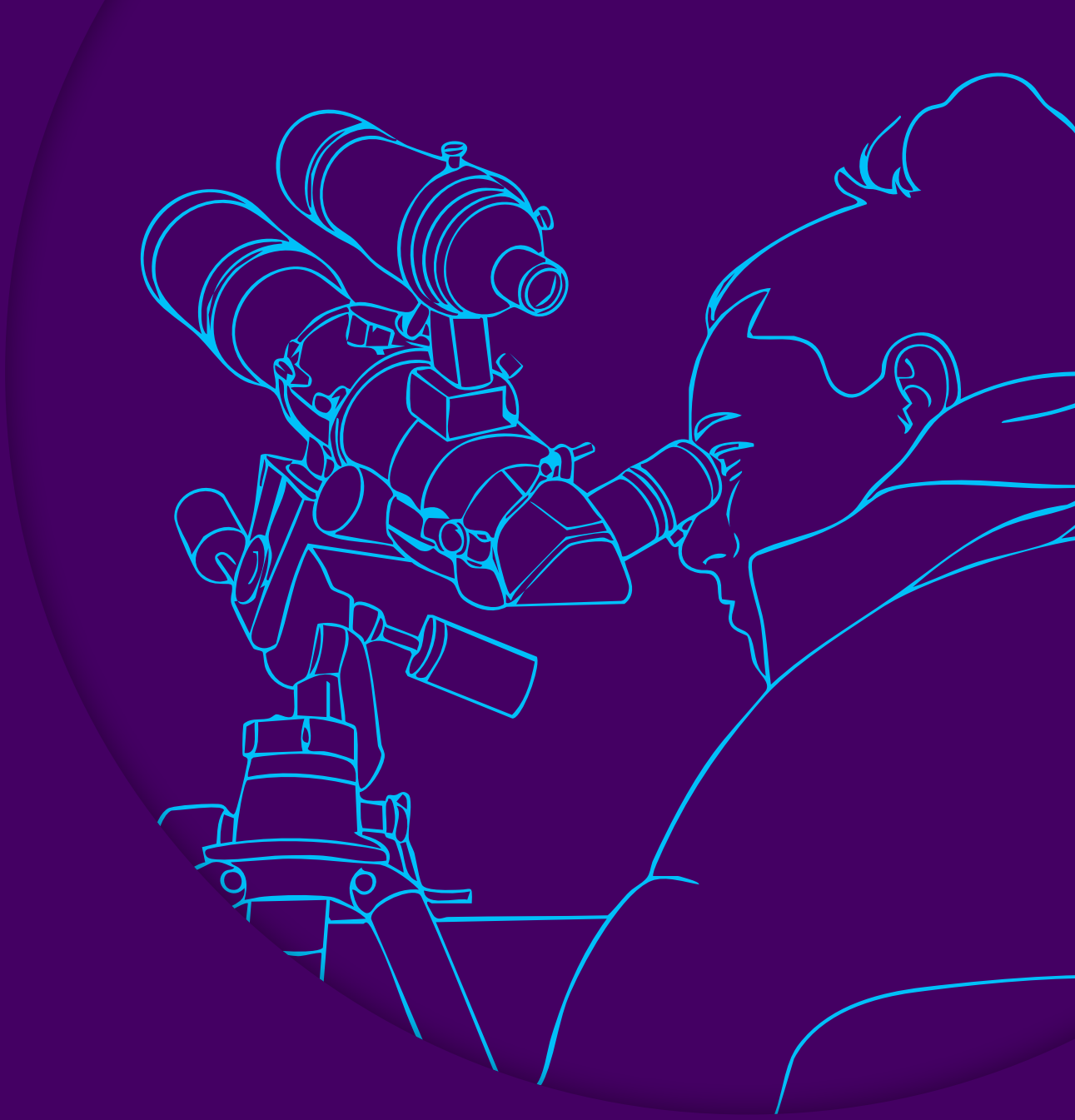
- Ensure that committees and working groups systematically include early- and mid-career scientists, with gender-balanced representation, to build experience, visibility and leadership pathways for women.
- Offer mentoring and leadership development programmes to support women's access to leadership roles and decision-making positions.
- Actively highlight the contributions of women scientists by ensuring balanced representation in high-visibility roles, including invited speakers, award recipients, leaders and public-facing communicators.
- Support the development of networks of women scientists within the organization, as well as across disciplines and at national or regional levels.
- Integrate sessions on women in science, gender equality and diversity into regular meetings, congresses and sponsored conferences, rather than treating them as stand-alone or ad-hoc events.
- Develop and maintain dedicated sections of the organization's website featuring interviews, profiles and biographies of women scientists.

6. COLLECTING GENDER-DISAGGREGATED DATA

- Identify and implement sustainable methods for collecting gender-disaggregated data to monitor change over time.
- Define and track relevant indicators at regular intervals. These indicators can include membership; delegates at general assemblies; nominations and elections; committee composition; event participation and speaker and chair roles; awards, recognitions and grants; as well as editorial boards and authors of sponsored publications.
- Collect data on women in the scientific community, disaggregated by scientific discipline, geographic region, and career stage, using sustainable methods that allow tracking over time. Where possible, data collection should also capture intersecting factors such as age, ethnicity, or disability, which may compound inequalities and disproportionately affect women.
- Establish an internal protocol specifying responsibilities, timelines and data storage to ensure continuity and accuracy.
- Review the data at regular intervals to identify gaps and progress. Use these findings to inform programme, policy and event design.

7. SHARING EXPERIENCES AND GOOD PRACTICES

- Review initiatives to improve gender balance implemented by other similar organizations.
- Actively communicate the measures your organization has implemented and the progress achieved so that this information is available to other organizations.
- Promote peer-to-peer exchange of experience and good practices across disciplines and regions. Scientific unions are encouraged to engage with the SCGES, and academies may consider establishing comparable structures or networks to support peer learning and coordination.



Results from the institutional survey

This section presents institutional-level data reported by participating scientific academies and international scientific unions on women's representation, participation, leadership, and recognition. Results are presented separately for academies and international unions, reflecting differences in institutional mandates, membership models, and governance arrangements.

ACADEMIES

Representation of women in academies

Data from the 2025 survey show that women remain underrepresented in academies relative to their overall presence in the scientific workforce, which was around 31% in 2022. Across 69 academies that responded to the survey, women represent an average of 23% of members, with substantial variation between institutions (2–58%). Focusing on national academies (*n* = 52), women account for an average of 19% of members (2–39%). Women's representation is higher in national young academies (35% on average), although the small number of cases (*n* = 9) warrants cautious interpretation.

The share of women among national academy members increased from 12% in 2015 to 16% in 2020 and reached 19% in 2025, indicating gradual albeit modest progress over the last decade. Comparison across the three surveys also shows a steady decline in the proportion of national academies with extremely low representation of women (defined as 10% or fewer women members), from 34% in 2015 to 21% in 2020, and 19% in 2025 (Figure 1).

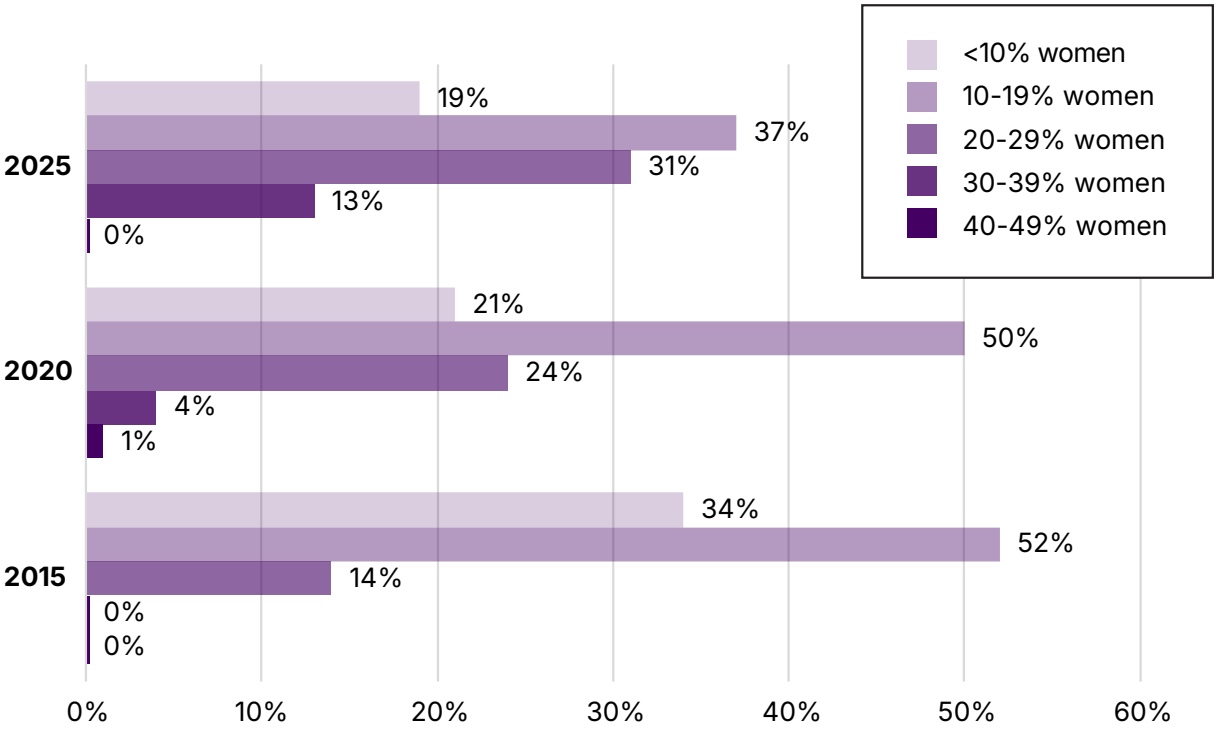


Figure 1. Percentage of women among members of national academies, 2015, 2020 and 2025

Geographically, no particular region stands ahead of the others. The national academies with the highest shares of women members (30%–39%) are distributed across the Americas and the Asia-Pacific region (Figure 2).

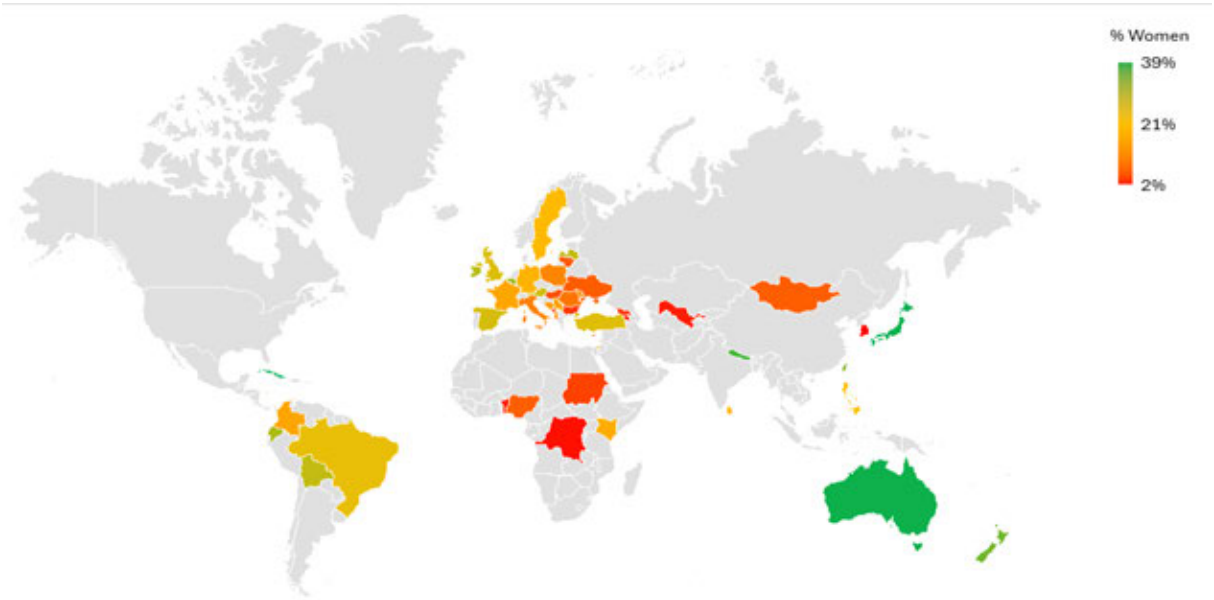


Figure 2. World map of the percentage of women members of national academies in 2025

This map presents data for national academies that participated in the survey and provided usable information on the share of women members. Coverage is incomplete, as participation was voluntary and a number of academies that were contacted did not respond or did not submit the relevant data. The stronger representation of European academies reflects higher participation rates rather than an intentional regional focus. In addition, the map does not provide national-level estimates, as several countries are represented by more than one participating academy. The map should therefore be interpreted as descriptive of the participating sample, not as a comprehensive global overview.

While no clear geographic pattern emerges; disciplinary composition stands as the main structuring factor (Figure 3). Women are most strongly represented in the social sciences, humanities and arts, followed by the medical and health sciences, and are least represented in the mathematical sciences, physical and chemical sciences, and computer science. Since 2015, women's representation has increased across all disciplines, but progress has been uneven. Gains have been strongest in the social sciences, humanities and arts and in the medical and health sciences, while growth in mathematics, physical and chemical sciences, and computer science has remained limited.

As a result, **women remain substantially underrepresented in several fields within national academies**. In mathematics, physical sciences and computer science, their representation continues to fall well below women's estimated share in the wider scientific community (around 30% in mathematics, 25% in physics and 28% in computer science; see the section on international unions for a non-exhaustive gender-disaggregated overview by discipline).

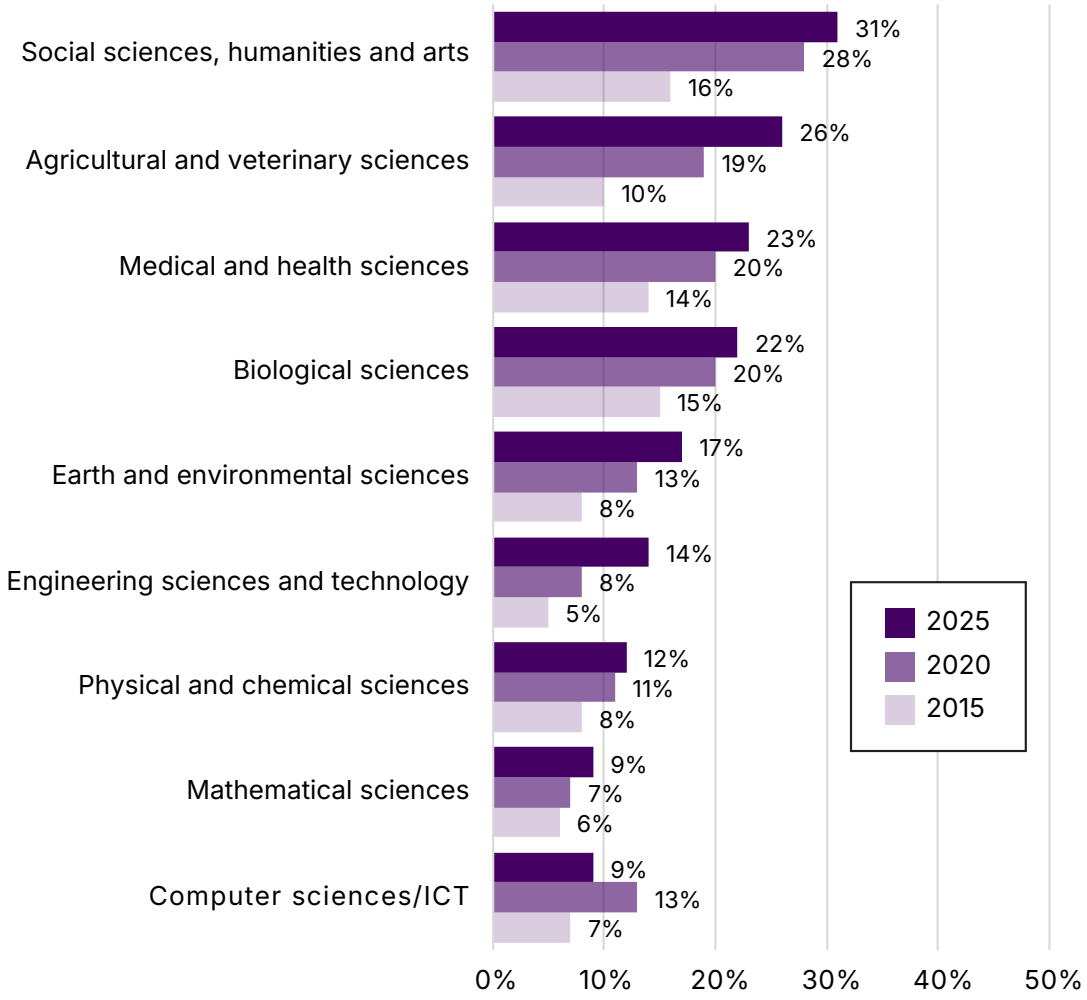


Figure 3. Percentage of women among members of national academies across nine fields in 2025, with comparison to 2015 and 2020

Pathways into membership: nomination and election processes

Most academies report keeping records of nominees (85%) and elected members (98%). However, fewer than half (27 out of 69) were able to consistently provide annual nomination and election data for the period 2020–2024. Among this limited subset (*n* = 27), the proportion of women nominees remained stable at around 30%, while women elected accounted for a slightly higher share (36%). Over the same period, the success rate for women – that is, the probability of election once nominated – increased from 24% in 2020 to 31% in 2024.

Regarding nomination processes (Figure 4), most academies rely on member-based nomination systems, either exclusively or in combination with other methods. Specific nomination criteria are widely used and typically emphasize research excellence, societal contribution and international recognition.

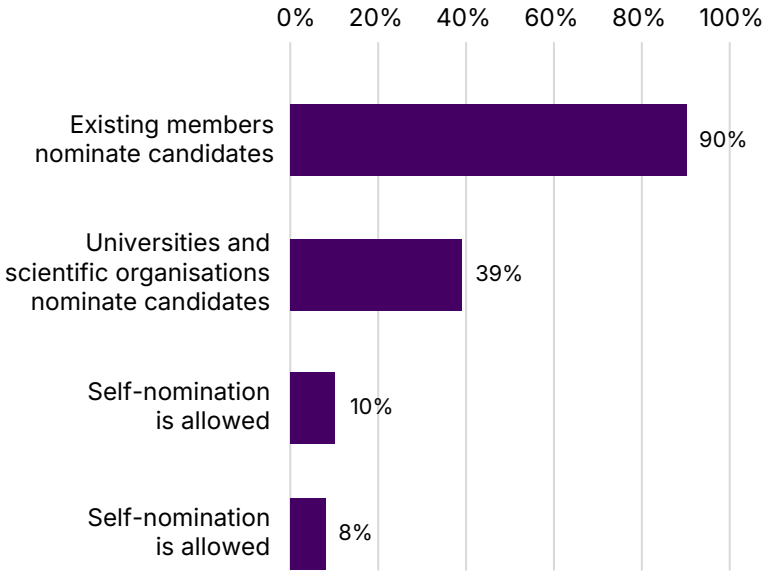


Figure 4. Sources of nomination for new members in national academies (n = 49)

CASE STUDY 1

Science Council of Japan: Reforming nomination processes under a national gender equality mandate

The Science Council of Japan (SCJ) is among the highest-performing science academies globally in terms of women's representation, with women accounting for approximately 39% of its membership. This progress reflects the interaction between sustained national policy commitments to gender equality and institutional reforms implemented within the Council over the past two decades.

Japan established a formal governmental commitment to gender equality through the Basic Act for a Gender-Equal Society (1999), followed by successive Basic Plans for Gender Equality adopted at cabinet level. In 2003, the government introduced the 2020-30 target, aiming to reach 30% women in leadership positions by 2020 in all fields of society. Given this background, SCJ reviewed its governance and membership selection process.

Turning point: reform of the nomination system (2005)

At the time these national targets were introduced, women's representation within the SCJ remained very low, with only a fraction of women among its members. **A decisive shift occurred in 2005, when the Council fundamentally reformed its membership selection process.**

Previously, candidates were nominated by national academic societies, which tended to submit candidate lists composed overwhelmingly of men. Under this model, the primary constraint on women's representation within the SCJ lay upstream, in the composition of nomination pools, rather than in final selection decisions made by the Council.

The 2005 reform replaced society-based nominations with an internal process led directly by the SCJ. Dedicated committees and subcommittees were established across its three disciplinary sections (Humanities and Social Sciences; Life Sciences; Physical Sciences and Engineering) to oversee nominations. Activated during nomination cycles, these structures monitor procedures and the composition of candidate pools, with explicit attention to the identification and consideration of women candidates at each stage of the process. This framework positions gender balance as a matter of selection quality and institutional accountability, while maintaining academic excellence as the primary criterion.

The impact of the reform was immediate: the proportion of women members increased from 6.2% in 2003 to 20% in 2005, and has continued to rise steadily since, reaching 38.9% in 2023. Notably, the life sciences and engineering – fields traditionally dominated by men and classified as STEM – have seen a significant rise in the proportion of women. By 2023, the share of women members in these fields had increased to around 40%, a level comparable to that observed in the humanities and social sciences.

Institutional mechanisms sustaining gender balance Another feature reinforcing this approach is the Science Council of Japan's use of fixed-term membership. Unlike academies with lifetime membership, Council members serve for limited terms of six years, with half of the membership renewed every three years. This structure enables regular renewal of membership and allows demographic change to occur more rapidly than in institutions with limited turnover.

In addition, an executive-level review mechanism applies to all internal committees and public-facing activities. The composition of work committees, as well as panels and speakers for symposia and forums organized by the Council, is subject to executive validation. While no formal numerical targets are applied, proposals consisting exclusively of male participants are not approved and are returned for revision. This practice extends gender balance considerations beyond membership and nominations to questions of visibility, voice, and authority in the Council's core activities.

Remaining challenges and next steps

Despite substantial progress in membership representation, challenges remain in the distribution of leadership roles. Although two of the four top leadership positions – the President and three Vice-Presidents – are held by women, imbalances persist, with older cohorts in senior positions remaining predominantly male. As committee chairs are often drawn from more senior members, men continue to be over-represented in chairing roles, while women are more frequently assigned secretarial or supporting functions. Addressing this imbalance, particularly by increasing the number of women serving as committee chairs, has emerged as a priority, although change is expected to be gradual rather than immediate.

More broadly, strengthening gender equality within the SCJ is framed as integral to its institutional credibility and influence. As a national science advisory body operating in an international context, the Council links its capacity to shape policy and societal debate to

its ability to demonstrate leadership on gender equity within its own structures, particularly given Japan's continued lag behind other G7 countries on gender equality indicators.

Key takeaways for other institutions

- **National policy frameworks** can act as enabling conditions and drive for institutional reform and internal governance changes.
- **Reforms that address nomination processes** and the composition of nomination pools can be critical for improving women's representation.
- **Membership turnover mechanisms**, such as fixed-term appointments, can accelerate change in representation.

Among 62 responding academies (Figure 5), 21 (34%) specified a minimum number of research publications as part of their nomination criteria. These academies had a slightly lower average share of women members (19%) compared to those without such criteria (23%). While the difference is modest, it may point to structural filters that influence the gender composition of membership.

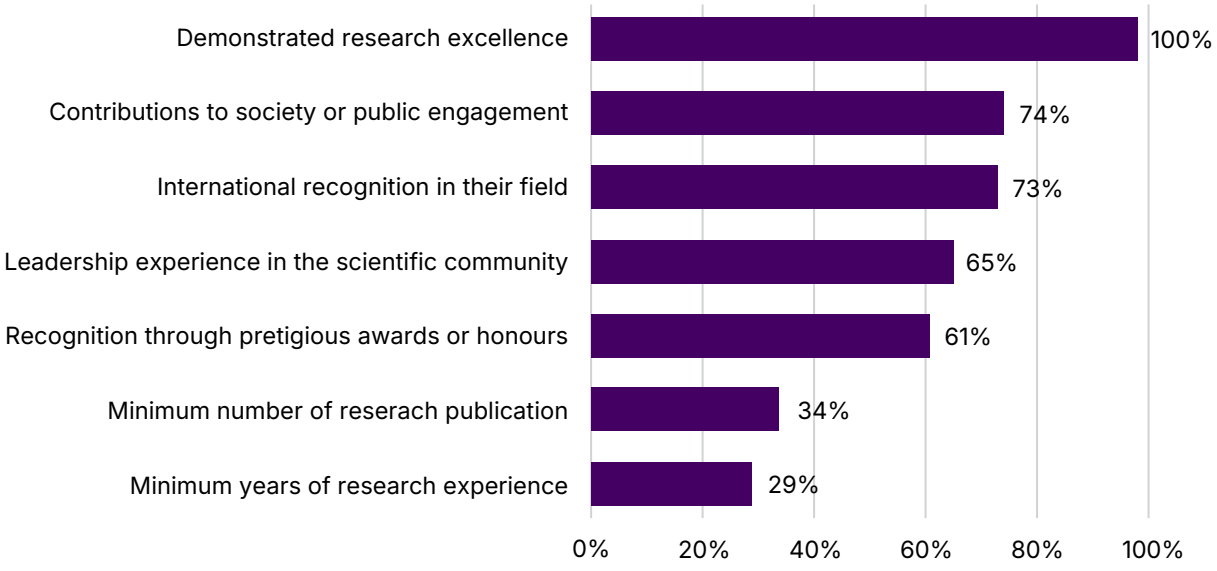


Figure 5. Criteria that nominees must meet for election to academies (n = 62)

Open-text responses in the survey revealed a range of additional nomination criteria reflecting diverse practices across academies. These include age and residency restrictions, diversity goals (such as gender, geography and disciplinary breadth), subjective expectations, and bibliometric thresholds. Some academies also consider leadership, public engagement or personal attributes like reputation and willingness to contribute.

Based on the available data, there was no statistically significant link between how nominations are structured – including who can nominate or the existence or communication of selection criteria – and the proportion of women among academy members. Formal

nomination models or the presence of selection criteria alone may not be sufficient to influence outcomes if underlying informal practices, biases or structural barriers remain unaddressed.

On election procedures (Figure 6), the most common model is a vote by all members, used by 85% of national academies. A smaller group rely on dedicated committees, with seven using this as their sole method. A few academies combine approaches, such as committee votes followed by general votes or disciplinary-level voting followed by general assembly approval. A minority involve a select group, typically a board or council, in elections.

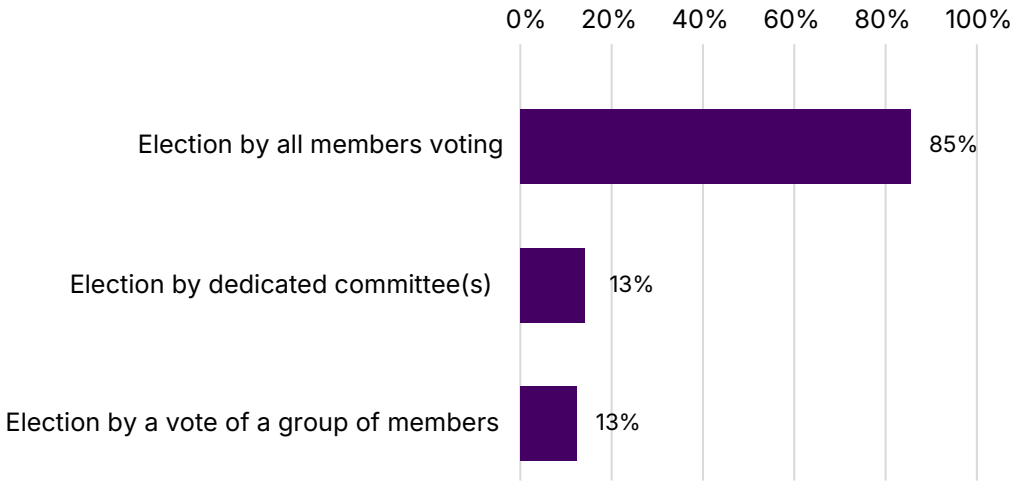


Figure 6. Election processes for new members in national academies (n = 47)

A comparison of women's representation across election models showed some variation: national academies using only a vote by all members reported an average of 17% women members (range: 4-39%), while those relying solely on committee-based elections reported a higher, approximately double, average of 34% (range: 9-57%). However, due to the small number of responses and overlapping practices, no statistically valid correlation can be drawn between election models and the proportion of women members at this time.

The use of quotas is limited. Most national academies (62%) report applying no quotas in nomination or election processes (Figure 7). Discipline-based quotas are used by 30% of national academies, while gender quotas are reported by only 2 national academies (6%). Academies – all types considered – reporting gender quotas show a higher average share of women members (27% versus 23%). However, the low number of cases (n = 6) limits the possibility of statistical testing, and the observed pattern should be interpreted with caution.

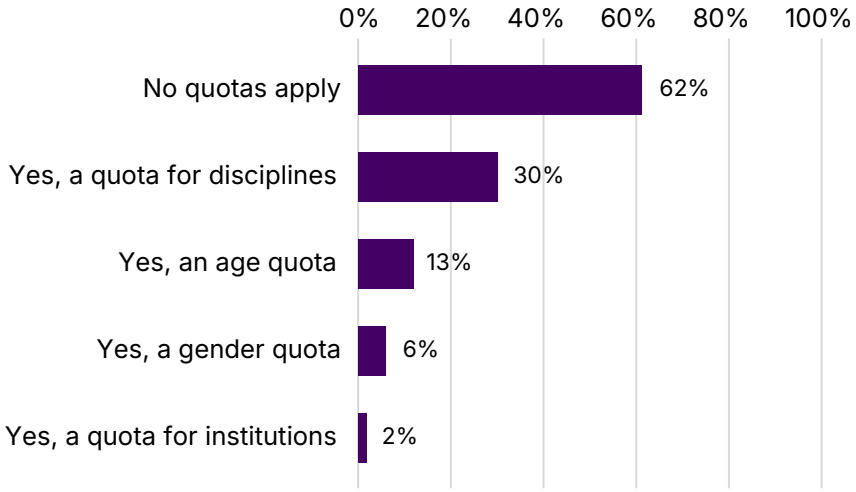


Figure 7. Application of quotas in the election of national academy members (n = 47)

CASE STUDY 2

Royal Spanish Academy of Sciences: embedding a gender quota in the statutes – a structural reform with measurable impact

Until 2020, women represented less than 10% of the membership of the Royal Spanish Academy of Sciences, a historic institution founded over 175 years ago and serving as Spain's national academy for the exact sciences. The Academy's statutes dated back to the 1970s – prior to Spain's democratic transition – and no woman had ever served as president. Recognizing the need to modernize both governance and composition, a new leadership elected in 2018 initiated a comprehensive statutory reform.

Institutional reform

Under the presidency of Jesús María Sanz-Serna, with Ana Crespo (now the Academy's first woman president) as Secretary-General and academician Juan Rojo, a three-member working group was mandated to draft revised statutes. Over a two-year period, the group conducted extensive consultations with Academy members to build consensus before submitting the proposal to the plenary. The reform addressed three interlinked challenges:

- the aging membership of the Academy;
- the persistent underrepresentation of women; and
- the need for clearer rules and responsibilities for members.

The revised statutes, approved in 2020, introduced two binding provisions applicable to new elections:

- **A 40% gender quota**: at least 40% of newly elected fellows must be women.
- **A 50% generational renewal rule**: 50% of new corresponding members must be under the age of 50.

The gender quota is applied section by section (mathematics, physics and chemistry, natural sciences). When a vacancy arises, the relevant section must assess its current gender balance. If women remain below the 40% threshold among its fellows, the vacancy must be filled by a woman candidate. To accelerate progress without relying solely on natural turnover, the number of senior fellow positions was expanded from 45 to 72. The process, embedded directly in the by-laws, is supported by the membership thanks to the long preparatory consultation.

Impact

The reform produced rapid and visible results. In just five years, women's representation rose from 9.7% in 2020 to 24% by 2025, marking one of the fastest increases among European academies. The new statutes also facilitated the election of the Academy's first-ever woman president, Ana Crespo, in 2024 – after 177 years of history.

Key takeaways for other institutions

- **Embedding gender balance in statutes** ensures accountability and long-term sustainability.
- **Adopting a consultative approach**, built on dialogue and consensus, eases resistance to change and strengthens ownership.
- Even in resource-constrained contexts, **structural reforms can deliver transformative impact without requiring significant funding**.

Participation, leadership and recognition in academies

Beyond overall membership, the survey examined women's representation in decision-making and recognition, including leadership roles, participation in general assemblies and committees, and the distribution of awards and prizes.

Presidency and governance

Women remain underrepresented in senior leadership positions. Among 50 national academies, only 20% currently have a woman as president – a modest increase from 17% in 2015, but no change since 2020. Academies led by women tend to have higher average shares of women members (27% compared to 20%); however, this difference was not statistically significant (Mann–Whitney $U = 233.0$, $p = 0.069$, $n = 63$). Because electoral cycles vary across academies, leadership data could not be directly verified against nomination and election data, limiting further analysis of potential reciprocal effects between women's presidency and the share of women members.

The distribution of women serving as vice-presidents and/or co-chairs across national academies ($n = 45$) remains uneven (Figure 8). Over half of national academies report no women in these leadership roles, while a smaller group has reached balanced representation. Intermediate levels of representation are comparatively rare, indicating a polarized pattern of leadership inclusion rather than gradual progression.

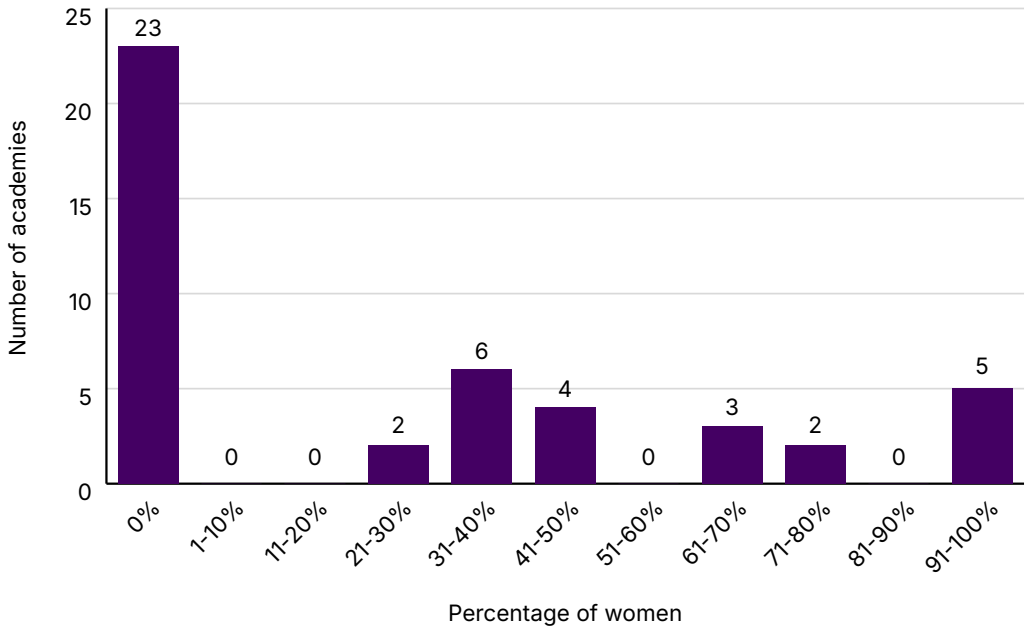


Figure 8. Percentage of women serving as vice-presidents and/or co-chairs across national academies (n = 45)

General assemblies

General assemblies constitute a key arena of participation and decision-making within academies, as they bring together members to deliberate on governance, strategy and elections. Among the 35 academies with a general assembly, women most often account for 20-29% of delegates (Figure 9). Only five academies reported achieving balanced representation (40% or more), while two academies reported having fewer than 10% women delegates.

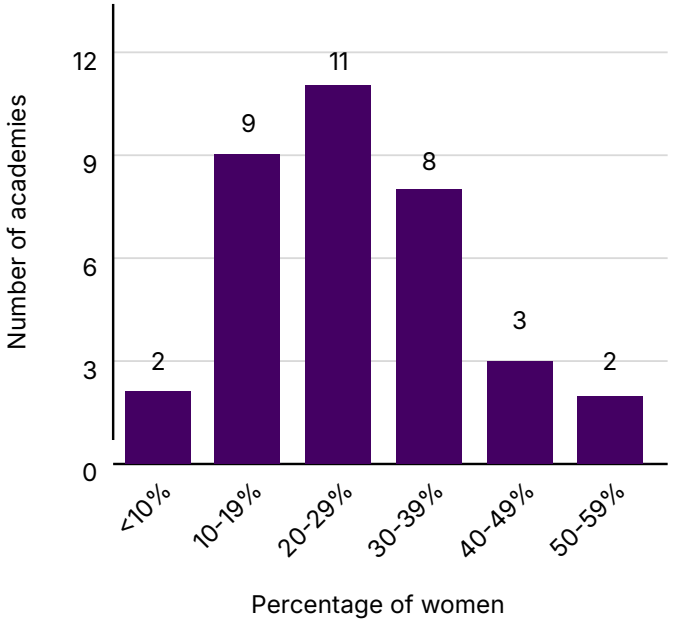


Figure 9. Percentage of women among delegates at the most recent general assembly of all academies (n = 35)

Just a minority of academies, 16 of 63 (25%), reported applying guidelines, targets or initiatives aimed at promoting more balanced representation among general assembly delegates. The hypothesis that gender-related policies would lead to greater representation of women in general assemblies was tested. However, the data showed no significant difference in the percentage of women delegates between academies that apply guidelines, targets or initiatives and those that do not (Mann–Whitney $U = 98.5$, $p = 0.172$, $n = 35$). Given the limited number of responding academies and the heterogeneity of measures reported, this finding should be interpreted with caution. Future editions of the survey could strengthen this analysis by collecting more detailed and standardized information on the scope, design, and implementation of gender-related policies.

Awards and prizes

Awards and prizes are a key mechanism through which academies recognize scientific contribution. Among the 67 academies that responded to this question, 78% reported awarding prizes or distinctions.

Gender-disaggregated data on nominations were provided by 24 national academies. As shown in Figure 10, women's representation among nominees follows a relatively concentrated distribution, with most academies clustered between 30% and 59% women nominees. Fewer academies fall at the extremes, indicating a broadly bell-shaped distribution centred around the 30–39% range rather than a polarized pattern.

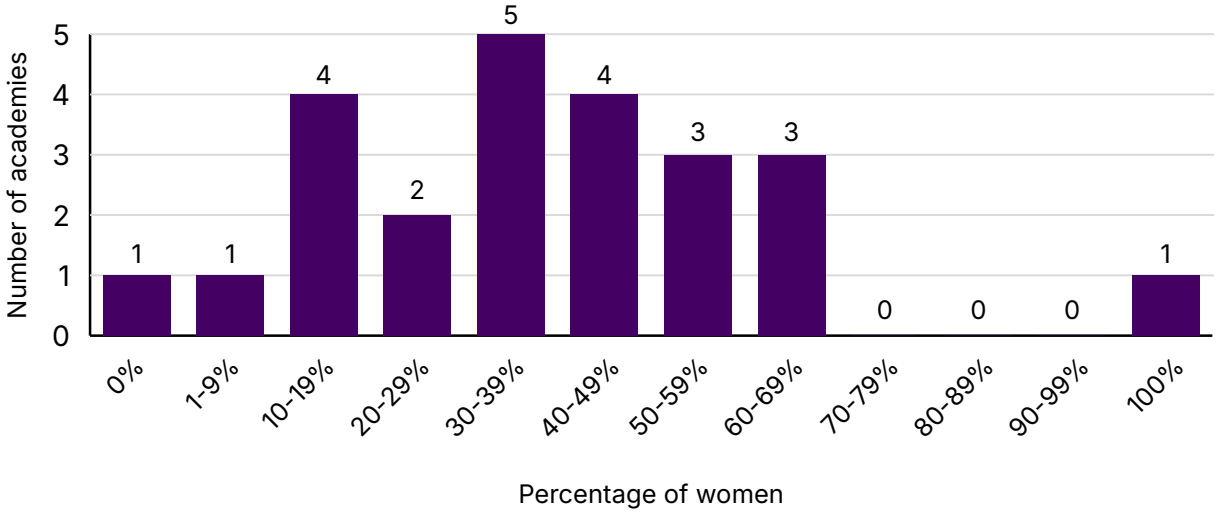


Figure 10. Percentage of women among nominees for awards or prizes bestowed by national academies (2020–2024)

Recipient data, reported by 35 national academies, show a more differentiated pattern (Figure 11). Among academies reporting on award recipients, women most commonly account for between 20% and 39% of recipients. A smaller but notable group of academies reports higher levels of representation, including 10 academies where women account for 40–59% of award recipients.

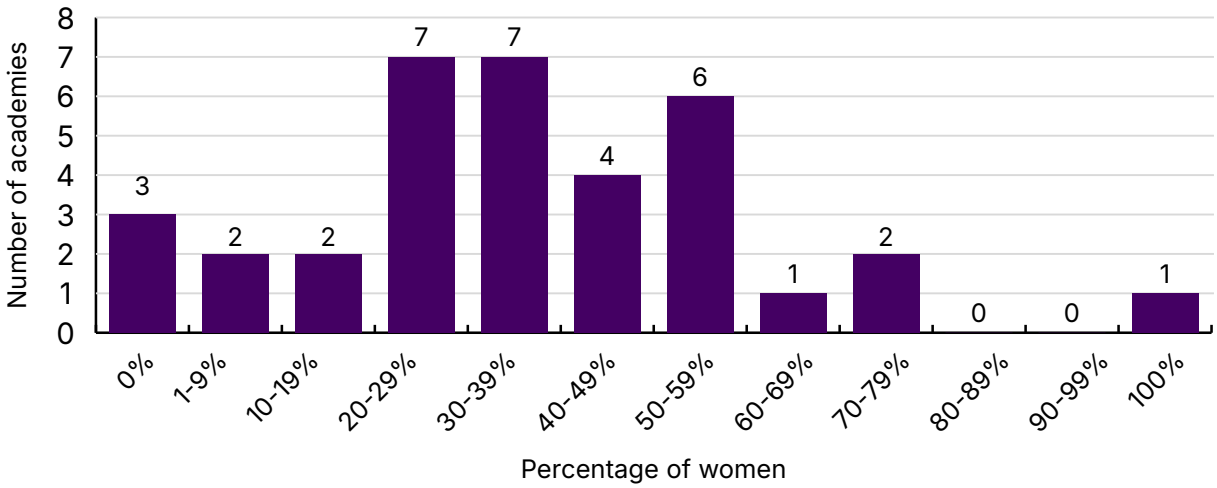


Figure 11. Percentage of women among recipients of awards or prizes bestowed by national academies (2020–2024)

Committees and working groups

Committees, task forces and working groups are central to the functioning of national academies. Nearly all academies (94%) reported using such structures. However, only 38 academies (59%) reported keeping gender-disaggregated records of participation, and usable data were available for 35 academies. Across this subset, women represented an average of 35% of participants in committees, task forces and working groups.

Institutional approaches to gender and inclusion in national academies

To assess how gender equality is formally addressed within national academies, the survey examined four key institutional dimensions: references in governing documents; formal policies or strategies; dedicated structures; and allocated resources. Together, these indicators provide a coherent picture of how deeply gender considerations are embedded in academy frameworks.

Since 2015, there has been some progress. At that time, only 35% of academies reported having gender equality policies or dedicated committees. By 2020, this had risen to 46%, and the 2025 data show continued gains: 62% of academies now report having gender-related policy documents, and 36% have dedicated committees.

Still, progress remains uneven. Only around one third of academies explicitly reference gender equality or non-discrimination in their governing documents, while a similar share makes no reference to gender-related issues at all. Where policies do exist, they are often limited to general statements rather than concrete strategies or action plans (Figure 12).

Figure 12. Percentage of academies with gender-related policies, strategies and/or guidelines

Institutional support mechanisms are also limited. Most academies (64%) have no dedicated structure to oversee gender-related work, and nearly nine out of ten report no specific budget for such activities. More worrying, just 15 out 63 academies have a formal grievance mechanism to address gender-related complaints, and those that do report a wide variety of approaches – from standing committees to multi-level procedures.

CASE STUDY 3

Slovak Academy of Sciences: from gender audit to institutional Gender Equality Plan

The Slovak Academy of Sciences (SAS) is the country's largest public research-performing organization, comprising more than 40 institutes across three divisions: mathematical, physical and technical sciences; life, chemical, medical and environmental sciences; and social sciences, humanities, arts and culture. Unlike traditional academies with elected memberships, the SAS functions as a research-performing organization, with researchers recruited through standard employment procedures rather than elected membership. This structure required a different approach to advancing gender equality – one focused on workplace culture, recruitment and leadership rather than nomination and election tracks.

Auditing and planning for gender equality

The SAS's first Gender Equality Plan (GEP) was developed through its participation in the EU-funded ATHENA project (*Implementing gender equality plans to unlock research*

potential), a Horizon 2020 Coordination and Support Action. The project aimed to remove structural barriers to gender equality and to help research-performing and research-funding organizations design, adopt and monitor their own GEPs.

As part of ATHENA, the SAS conducted a comprehensive gender audit to assess recruitment, decision-making, work–life balance and gender integration in research. The findings highlighted the need for a more structured and systematic approach to equality within the Academy. This process directly led to the adoption of the SAS's first institutional GEP in 2021.

This first GEP brought:

- a rise in women's representation within the Presidium and Scientific Council of the Academy;
- cultural change, observed through more positive attitudes towards gender equality among researchers and doctoral students;
- a dedicated gender equality chapter in each institute's annual report, documenting initiatives on work–life balance, gender integration in research and social measures; and
- sustained budget allocations for equality initiatives, renewed for the 2025–2029 period.

Key initiative: "Return to Research" for parents after parental leave

A flagship measure introduced under the first GEP is the "Return to Research" programme, supporting researchers, most often mothers, after parental leave. Around eight competitive research grants are awarded each year, with calls every six months. The grants provide financial support for parents to immediately restart individual research projects upon returning to work, helping them regain confidence, visibility and scientific momentum. The programme has become one of the Academy's most appreciated equality measures and is viewed as easily replicable in other contexts.

Remaining challenges and next steps

Building on the ATHENA-supported framework, a new Gender Equality Plan (2025–2029) will focus on consolidating achievements and addressing persistent gaps. The new presidency, appointed in June 2025, plans to appoint gender coordinators in each institute and launch leadership training programmes to encourage more women to apply for institute director positions – a number that had declined in recent years.

Key takeaways for other institutions

- **Participation in structured, externally supported initiatives** can act as a catalyst for institutional change, helping organizations move from ad-hoc actions to systematic, evidence-based equality strategies.
- **Long-term budgetary commitment** ensures sustainability of equality actions beyond external funding.
- **Targeted reintegration grants** are a high-impact measure to retain researchers and strengthen confidence after career breaks.

Initiatives to increase the representation of women in academies

Beyond formal documents and structures, academies also report operational initiatives to promote gender equality and increase women's representation. In 2025, just over half of responding academies (52%) reported having such initiatives, up from 36% in 2020. **This increase points to a growing institutional engagement with gender equality over the past five years.** However, a closer look at the initiatives shows that they most often focus on broad promotion and awareness, rather than on direct interventions in membership selection processes (Figure 13).

Less frequently reported were initiatives involving policy advocacy, dedicated research, funding programmes and practical measures to support participation, such as accommodating women with children at scientific meetings or events.

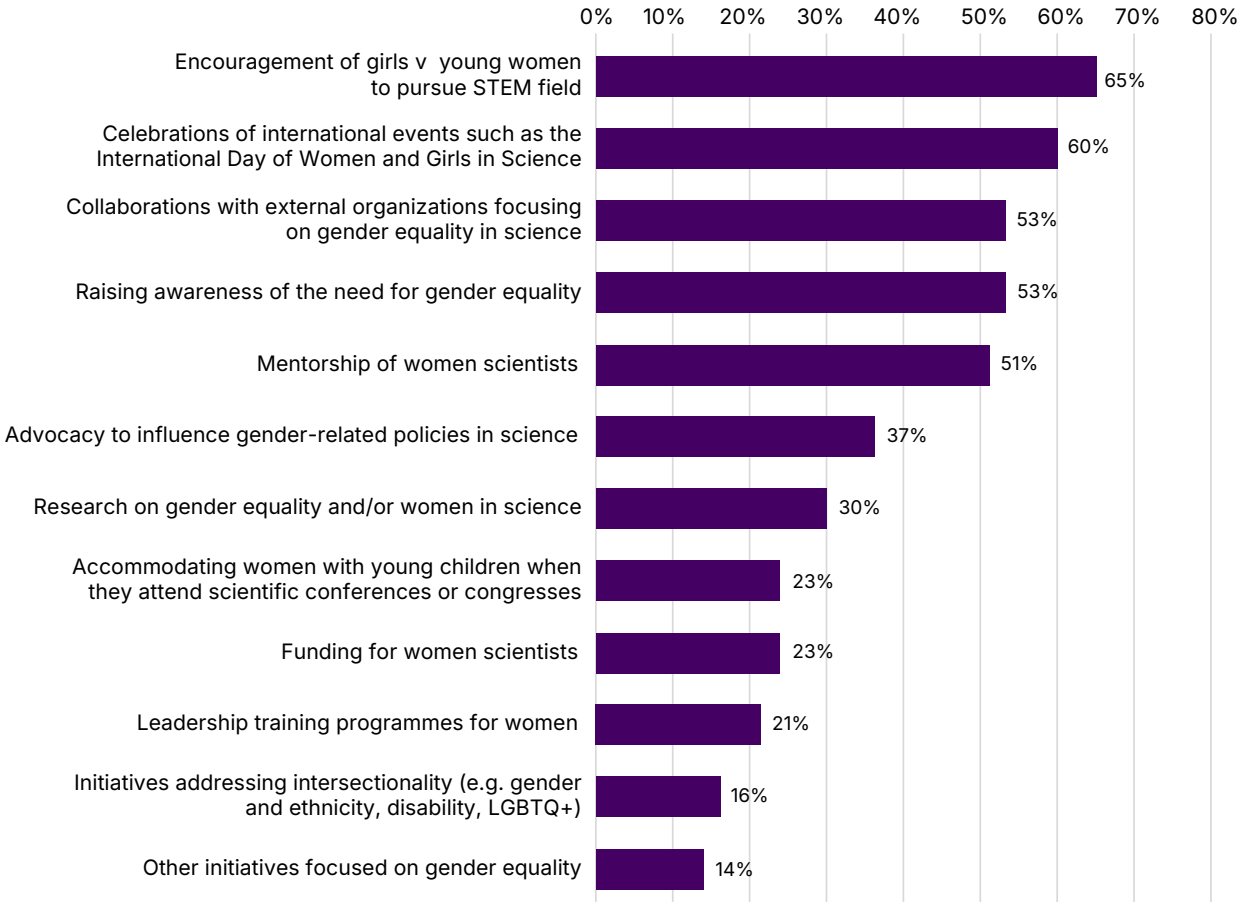


Figure 13. Formal gender-related initiatives implemented by academies (n = 43)

Finally, only 16 of 62 academies (25%) declared having a webpage on gender equality or women in science.

CASE STUDY 4

Hungarian Academy of Sciences: supporting women's advancement through targeted grants

The Hungarian Academy of Sciences (MTA) has doubled its proportion of women members over the past decade (from 5% to 10%), although overall representation remains low. Progress accelerated after a turning point in 2016, when no women were nominated for election. This absence was widely described within the Academy as a "shock" and prompted sustained institutional reflection on structural barriers to women's advancement.

Institutional response

In response, the Academy established a high-level Committee on Women in Science to advise the presidency on measures to address gender imbalance. Initially chaired by Prof. Vanda Lamm and currently by Prof. Enikő Bollobás, the Committee developed a set of targeted actions addressing both the career pipeline, by supporting women's progression towards eligibility for election, and visibility, by strengthening recognition of women's scientific contributions.

Key Initiative: grant for women scientists with young children

A flagship measure introduced by the Committee is a one-year grant supporting women scientists who are pursuing the advanced "Doctor of the Academy" title and who have children under the age of 14. This qualification is a key prerequisite for election as a corresponding member and for appointment as a full professor.

The grant provides a full-year salary, relieving recipients of teaching and administrative duties and allowing them to focus on completing their dissertation. The programme is formally open to men in comparable caregiving situations, such as single fathers or parents of children with disabilities.

The programme has produced strong results. Within two years of receiving the grant, 92% of recipients had successfully defended their dissertations and obtained the "Doctor of the Academy" title. To date, more than 100 scientists have benefited from the scheme, which is supported by a dedicated and sustained gender equality budget.

Complementary measures

Additional actions reinforce the impact of the grant scheme:

- Sections that nominate women candidates are allocated additional membership seats, creating incentives to improve gender balance in elections.
- The Committee has published three volumes documenting the lives and scientific contributions of Hungarian women scholars, strengthening historical visibility and recognition.
- Ongoing dialogue with Academy leadership has secured sustained political and financial support, including a public commitment by the President to fund effective equality measures.

Remaining challenges and next steps

Despite these advances, structural disparities persist. An independent study using national bibliometric data identified gender gaps in publication and citation patterns growing over time. By mid-career, women's average output lagged approximately ten years behind that of men; by age 70, women's publication levels corresponded to those of men around age 50.

In response, the Committee is preparing further recommendations for the Academy's presidency, including closer alignment of national grant schemes with European programmes that account for parental leave and caregiving, and the removal of informal age limits in nomination practices.

Key takeaways for other institutions

- **Researching and addressing structural bottlenecks**, rather than broad participation, increases the effectiveness of equality measures.
- **Targeted grants** that give researchers protected time to focus on critical career milestones can have immediate, measurable results.
- **Formal budget allocation** and leadership endorsement is critical to success and sustainability.
- **Visibility efforts**, such as documenting women's scientific contributions, help change institutional culture and inspire future generations.

Monitoring the effectiveness of gender-related initiatives

Systematic monitoring of gender-related initiatives is also limited. Among academies that reported having initiatives in place, 24% indicated that they currently measure their effectiveness, while a further 18% reported plans to introduce measurement systems within the following year.

Institutional challenges faced by academies in pursuing gender equality

When asked about challenges to advancing gender equality, academies most frequently point to limited institutional capacity – including funding, staffing or internal commitment – and the underrepresentation of women in leadership and decision-making roles (Figure 14). By contrast, the availability of gender-disaggregated data is less commonly identified as a major constraint.

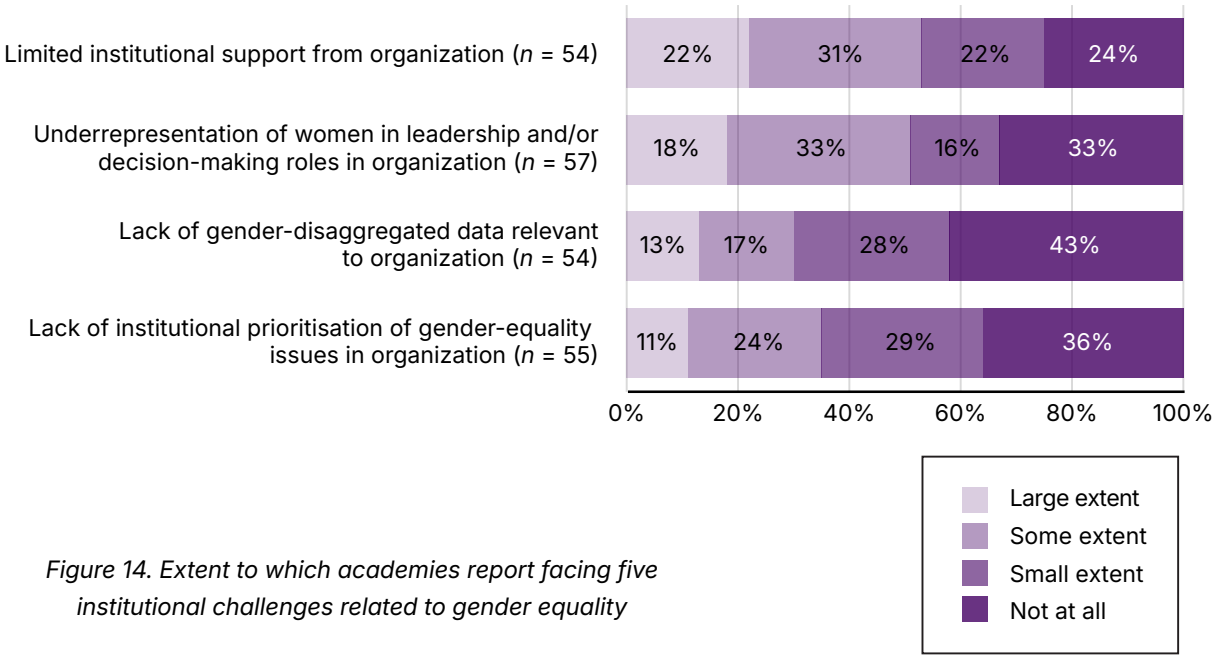


Figure 14. Extent to which academies report facing five institutional challenges related to gender equality

Open-ended responses provide further insight into the nature of these challenges. Several academies pointed to the absence of a clear institutional vision, measurable objectives or shared understanding of gender equality goals, sometimes combined with resistance to change among parts of the membership. Others noted resource-related constraints, including the absence of dedicated budgets for gender-related activities or limited financial capacity to implement strategic plans.

Some academies reported deeper pipeline-related challenges, such as low numbers of women applying for or being nominated for membership, which they perceived as limiting the scope for change.

A number also described situations in which gender-related initiatives exist but remain informal or undocumented, **reflecting reliance on individual commitment rather than institutionalized processes.**

Finally, a small number of academies highlighted context-specific constraints, including severe disruptions linked to conflict or crisis situations, where institutional survival, displacement of members or urgent financial needs take precedence over longer-term gender equality efforts.

INTERNATIONAL UNIONS

International scientific unions differ fundamentally from national academies in their structure and mandate. They do not generally have individual members in the same way as academies; instead, most operate through geographical membership, with national or regional scientific bodies representing disciplinary communities. Analyses of women's representation within unions therefore rely on a combination of disciplinary estimates, data reported by national member organizations, and participation or governance data where available.

Representation of women in the scientific communities

Systematic data on the size and gender composition of scientific communities remain limited. While many unions reported lacking access to reliable global data, 16 unions provided estimates of the proportion of women in their disciplines – representing 53% of SCGES partner unions and 25% of non-partner unions that responded to the survey.

In the absence of standardized global data on the gender composition of scientific disciplines, international scientific unions play a unique role in providing discipline-wide estimates of women's representation. Drawing on their international scope and connections with national member organizations, some unions are able to assemble indicative figures that are otherwise unavailable at the global level.

Among the unions that provided estimates, women's representation varies substantially across disciplines. Women are closest to gender balance in the social sciences, humanities and related fields, as well as in some life and earth sciences. In anthropology (55%), laboratory animal science (53%), cartography (45%), biochemistry and molecular biology (45%), geosciences (40%), and spatial photogrammetry and remote sensing (40%), women represent between 40% and 60% of the disciplinary community.

Intermediate levels of representation are reported in systems analysis (36%), history and philosophy of science and technology (35%), soil sciences (around 30%), crystallography (30%), and mathematics (30%). Lower levels persist in several STEM fields, including computer science (28%), physics (25%), and speleology (25%).

These estimates are based on a variety of data sources, reflecting both the lack of harmonized global statistics and differences in how unions assess gender dynamics within their disciplines. Most of the unions base their estimates on data from national member organizations, including the composition of their committees, or participant data from recent scientific congresses.

For example, the International Union of Pure and Applied Physics estimates that women represent around 25% of the global physics community, based on data submitted by national delegations to the International Conference on Women in Physics, where most countries fall within the 20–30% range. Similarly, the International Mathematical Union reports an

estimated 30% share of women in mathematics, drawing on authorship data from the zbMATH database, which shows a long-term increase in women's participation from around 10% in 1970 to 30% in 2019 (Figure 15).

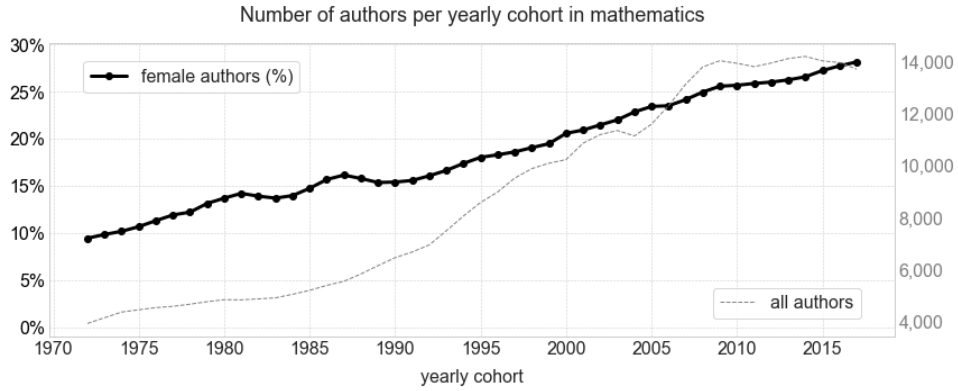


Figure 15. Number of active (publishing) mathematicians since 1970 and percentage of them that are women. Source: Gender Gap in Science Project

Representation of women in unions

International scientific unions differ in how they define and organize membership, reflecting variations in disciplinary scope and organizational mandate. Most unions operate through geographical membership, whereby national or regional bodies represent disciplinary communities, rather than individual scientists. Among responding unions, this model is used by nearly all (37). Only a small number rely exclusively on individual membership (3), while a minority combine geographical and individual membership models (9).

Because few of these unions track individual-level data, analysis of gender composition remains limited. Among those that do, women's representation varies considerably. The International Union of Anthropological and Ethnological Sciences reported the highest share of members, with 59% women, followed by the International Political Science Association and the International Union of Crystallography, both at 41%. Other unions devoted to chemistry, statistics and earth sciences reported figures between 27% and 33% (Figure 16). The Association for Computing Machinery highlighted internal disparities, with 33% women among geographical members but only 14% among individual members – underscoring differences across both disciplines and membership types.

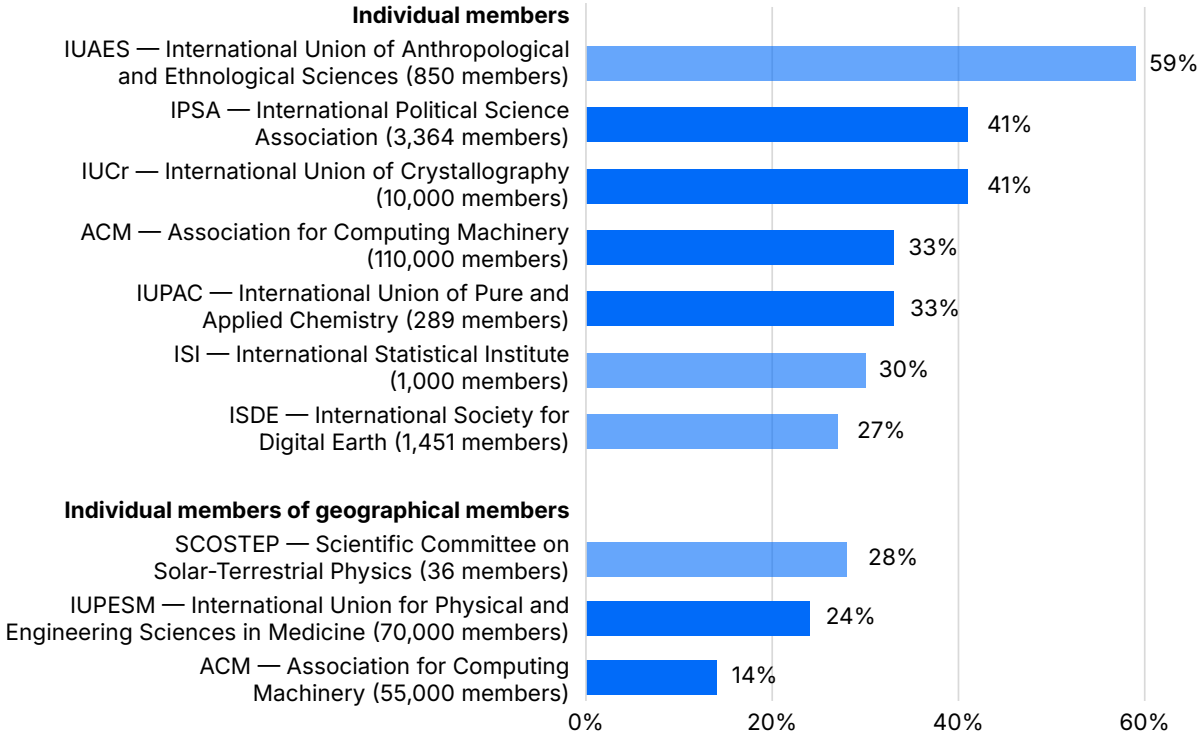


Figure 16. Percentage of women members in international scientific unions with individual membership

Participation, leadership and recognition in unions

Governing bodies

Gender representation in union leadership appears comparatively strong. Of the 38 unions that provided data on the composition of their governing bodies, over half of these unions report that women make up between 40% and 59% of their leadership (Figure 17). On average, women hold 40% of leadership positions across international unions.

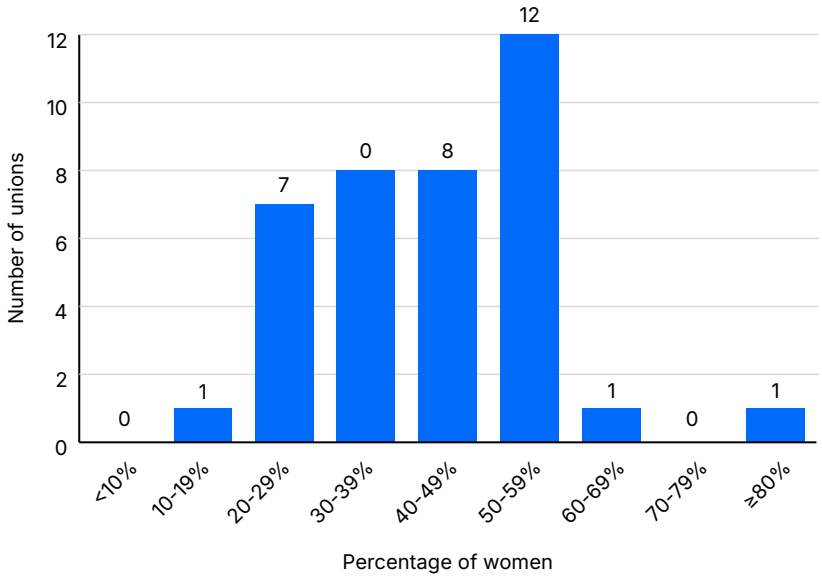


Figure 17. Percentage of women serving on the governing bodies of 38 international scientific unions

It should be noted that among the 15 unions that participated in both survey rounds, there has been a marked increase in the proportion of women in governing bodies between 2020 and 2025. On average, the share of women rose from 31.8% in 2020 to 45.5% in 2025. This improvement coincides with sustained gender equality efforts within international unions, including those supported through the SCGES. Thirteen of the fifteen unions in this longitudinal sample are SCGES partners, though the data do not allow causal attribution.

General assemblies

Gender-disaggregated data on participation in core union activities remain limited. Although 35 unions reported holding a general assembly, only 9 were able to provide gender-disaggregated data on delegate participation (Figure 18). **About one third of these unions (12 out of 35) indicated that they apply guidelines, targets or initiatives to promote more balanced gender representation among delegates.** No significant differences were found between SCGES partner unions and other unions in this regard. In most cases, unions reported relying on general provisions in their governing documents rather than implementing specific operational measures to achieve gender balance in assemblies.

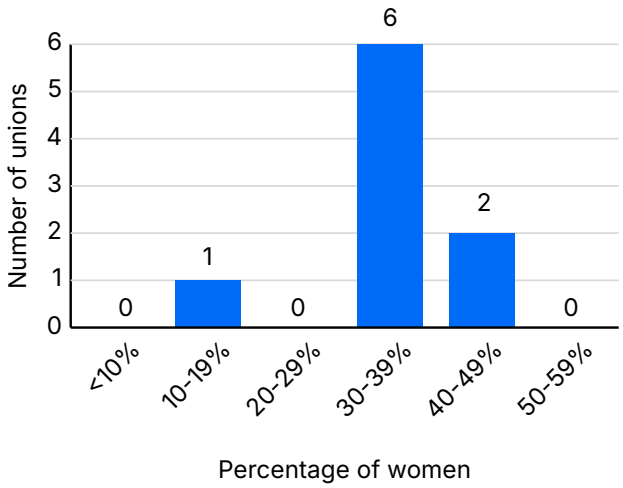


Figure 18. Percentage of women among delegates at the general assemblies of nine international scientific unions

Scientific congresses

Data availability improves somewhat in relation to scientific congresses, although important gaps remain. Half of the unions reported recording the gender of attendees at their most recent congress, while 56% recorded the gender composition of their congress organizing committees. By contrast, nearly 80% of unions recorded the gender of invited speakers. Where data were available, women's participation was relatively similar across roles, ranging from 36% among attendees to 38% among invited speakers and organizing committee members, on average in line with the proportion of women in the scientific community. SCGES partner unions were more likely than other unions to record gender data for invited speakers, although sample sizes remain small.

Awards and prizes

Recognition through awards and prizes represents another area with limited data coverage. Of the 33 unions that reported awarding prizes, fewer than half provided gender-disaggregated information. Among the 15 unions that reported nomination data, women accounted for less than 30% of nominees in most cases (Figure 19).

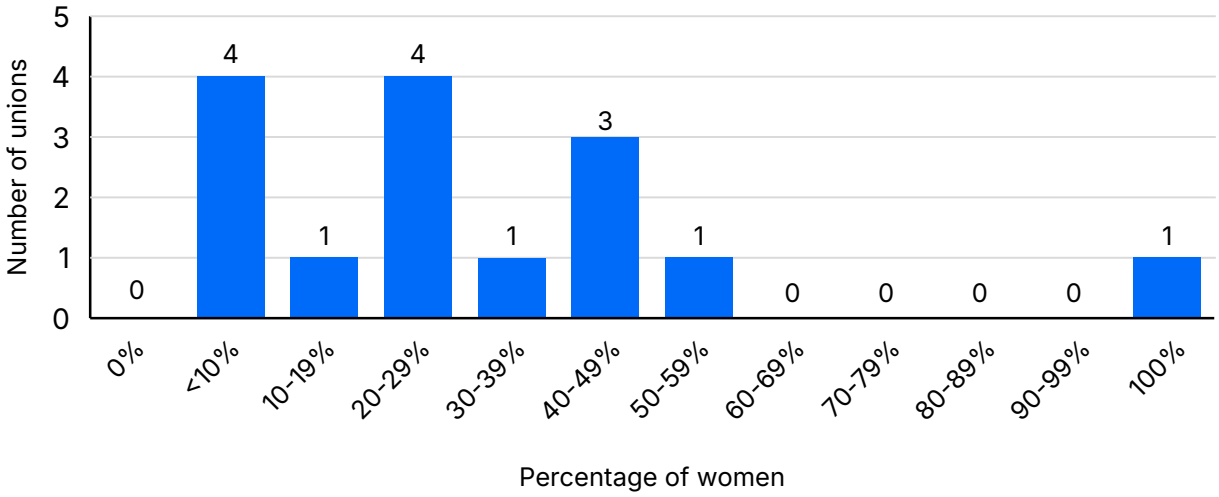


Figure 19. Percentage of women nominees for awards or prizes bestowed by unions (2020 to 2024)

Award recipient data show considerable variation. Many unions reported that women represented between 20% and 29% of recipients; approximately one third reported women as 40–59% of recipients; and few reported either exclusively men or exclusively women recipients – often based on a single award (Figure 20). SCGES partner unions generally reported higher shares of women nominees and recipients than other unions, although the limited number of cases warrants cautious interpretation. **Notably, seven SCGES partner unions (37%) reported having awards specifically dedicated to women, compared to none among the other unions.**

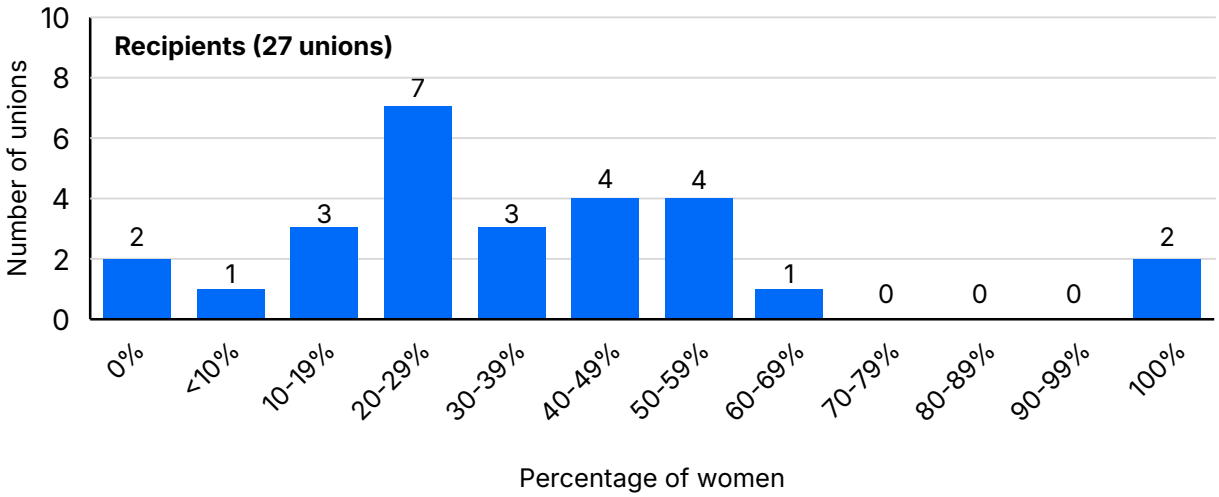


Figure 20. Percentage of women recipients of awards or prizes bestowed by international scientific unions (2020 to 2024)

Policies, structures and resources for inclusion in unions

Gender-related issues are unevenly embedded in the formal frameworks of scientific unions (Figure 21). 'Gender equality' (or inequality) is the most frequently referenced terminology, mentioned in the governing documents of 64% of unions – including 79% of SCGES partner unions and 50% of other unions. Comparatively, in 2020 only 45% of unions explicitly mentioned the need to increase women's participation in their activities.

Broader concepts such as 'diversity' and 'diversity, equity and inclusion' (DEI) are referenced less often. Diversity appears in the documents of 56% of all unions – 74% of SCGES partner unions and 40% of other unions. DEI is mentioned by 41% of all unions – 53% of SCGES partners unions and 35% of other unions.

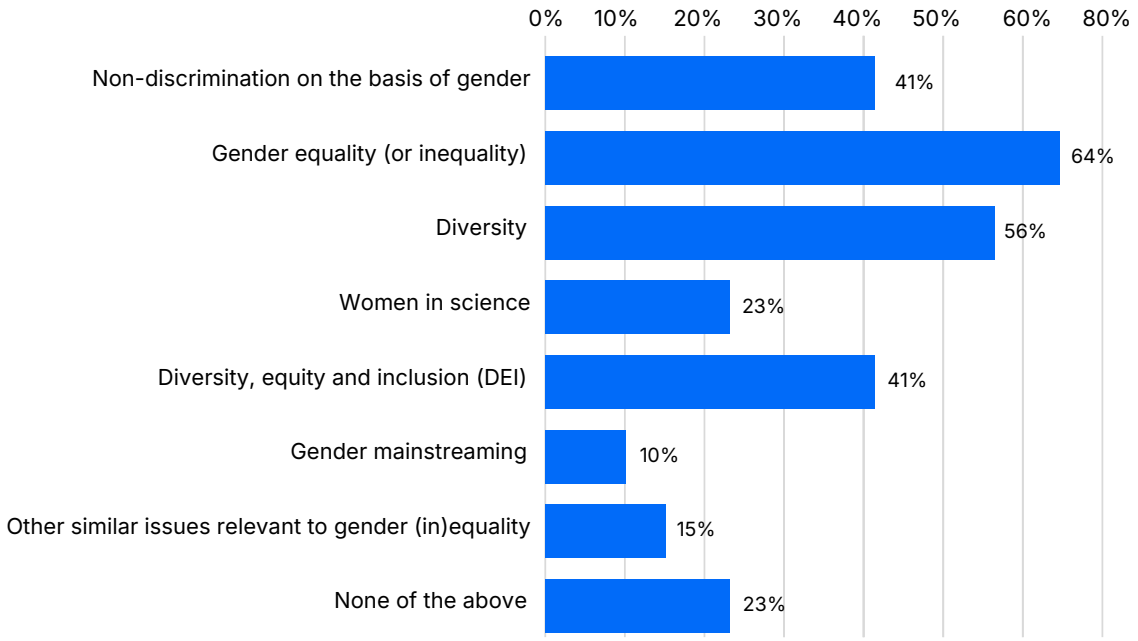


Figure 21. Issues explicitly mentioned in the governing documents (e.g. constitution, by-laws or statutes) of international scientific unions (n = 39)

Formal gender-related policies or strategies are also more prevalent among SCGES partner unions. Only 21% of SCGES partner unions reported having no such policies, compared to 33% among other unions.

Organizational structures dedicated to gender equality further distinguish unions. Nearly half (46%) of all unions reported having a permanent structure focused on gender, and 32% reported an ad-hoc or temporary one. A large majority of SCGES partner unions (84%) reported having such structures, while 61% of other unions reported having none (Figure 22).

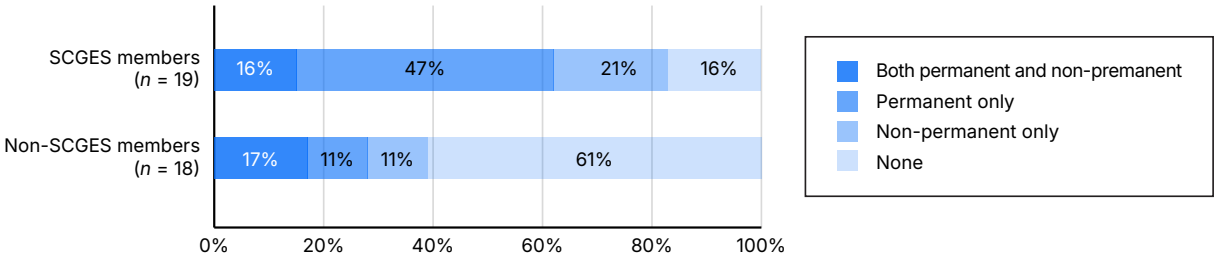


Figure 22. Structures with a specific mandate to drive change in the area of gender equality at SCGES partner unions and other unions

Among those with dedicated structures, most unions – particularly SCGES partners – reported having sufficient resources to support their gender-related work.

CASE STUDY 5

International Union of Pure and Applied Physics: the role of the Women in Physics Working Group

Women remain significantly underrepresented in physics worldwide. In most regions, they account for about 25% of the physics community, though estimates vary by country and field. Countries such as Türkiye report higher levels of participation, while others, including Spain, have historically lower representation. Field-specific trends also differ: environmental and molecular physics tend to attract more women, whereas low-temperature physics and space physics remain heavily men-dominated. Astronomy shows comparatively higher participation of women. Accurate global estimates are further complicated by the fact that many physicists move into industry and are no longer captured in academic statistics.

The Women in Physics Working Group

The International Union of Pure and Applied Physics (IUPAP) established the Women in Physics Working Group in 1999 following a resolution of its General Assembly in Atlanta, USA. The Working Group's initial mandate was to survey the global situation of women in physics, report to the IUPAP Council and Liaison Committees, and propose concrete measures to improve women's participation. This early work laid the foundation for systematic evidence-gathering on gender disparities in physics. Over time, the role of the Working Group has expanded beyond data collection and monitoring to share best practices with national chapters and engage in dialogue with IUPAP's Executive Council – advising the leadership on gender equality.

One of the clearest indicators of progress made by the Working Group is the increased presence of women in IUPAP's governance. Their representation on the Executive Council rose from 25% in 2020 to 50% in 2025 and is now higher than the global average for women in physics, reflecting deliberate and sustained efforts to improve gender balance. A notable milestone was the election of a former Chair of the Women in Physics Working Group as President of IUPAP in October 2024.

Key initiative: the International Conference on Women in Physics

A cornerstone of the Working Group's activity is the International Conference on Women in Physics, held every three years for more than two decades. While IUPAP does not host a general world congress for physics, the Conference has become its most visible global gathering. Each edition brings together 200–300 participants from around 60 countries, organized into national teams that prepare data, case studies and action plans.

Participation from low- and middle-income countries is actively promoted, with funding for travel grants coming from a mix of sources, including IUPAP itself, company sponsors, and local sponsors such as universities and the host region's national physical society.

Remaining challenges and next steps

One identified area for progress is awards. With only 10 women among 43 awardees in recent years, better tracking of gender representation during nomination and shortlisting processes is required to identify where imbalances arise.

Additionally, IUPAP does not yet have a formal internal mechanism for handling complaints of harassment. While all IUPAP-sponsored meetings are required to have their own reporting systems and a designated adviser, the lack of a union-wide approach leads to inconsistencies across events.

As IUPAP widens its focus from women in physics to broader gender and diversity considerations, the organization is entering a new phase. The replacement of the Gender Champion Vice-President with a more encompassing Equity, Diversity and Inclusion Champion highlights this evolution. Ensuring continuity for the Women in Physics Working Group – whose work is highly valued globally – will help anchor this broader agenda while preserving the group's recognized role and expertise.

Key takeaways for other institutions

- **Collecting and leveraging data strategically** helps identify priority areas and raise awareness about gender gaps.
- **Promoting dedicated spaces and events for women** is part of ensuring that all sponsored meetings actively support women in science.
- **Monitoring award processes** can improve the gender balance among nominees and awardees, recognizing that low representation reflects broader structural challenges.

Despite the presence of some gender-related structures, a persistent gap remains between having formal mechanisms and ensuring their effectiveness and accountability through adequate resources and evaluation processes.

Dedicated budgets for gender equality remain uncommon. Overall, 71% of unions reported having no specific budget for gender equality or diversity. However, such budgets are significantly more common among SCGES partner unions (32%) than among other unions (5%).

Formal grievance mechanisms for gender-related complaints were reported by only nine unions (24%). In most cases, responsibility for handling complaints is assigned to executive committees or governing boards.

Systematic evaluation remains rare. Systematic evaluation of gender equality initiatives remains uncommon among international scientific unions. Among all responding unions, only 13% reported assessing the effectiveness of such initiatives. Even when considering only unions that have gender equality initiatives in place, this proportion rises only modestly, to 19%.

Finally, twelve out of 37 unions (32%) reported having webpages dedicated to gender equality or women in science – ten of which belong to SCGES partner unions.

Initiatives to promote gender equality in unions

In 2025, 69% of international scientific unions reported having initiatives in place to promote gender equality. Among the 27 unions that provided detailed information on their activities, most initiatives focus on collaboration, visibility and awareness-raising – with less emphasis on direct support for individual development (Figure 23).

The most frequently reported initiative was collaboration with external organizations working on gender equality in science, cited by 59% of unions (78% of SCGES partner unions and 40% of other unions). This was followed by the celebration of international events such as the International Day of Women and Girls in Science (56%), awareness-raising campaigns (41%), and engagement in research on gender equality and women in science (33%).

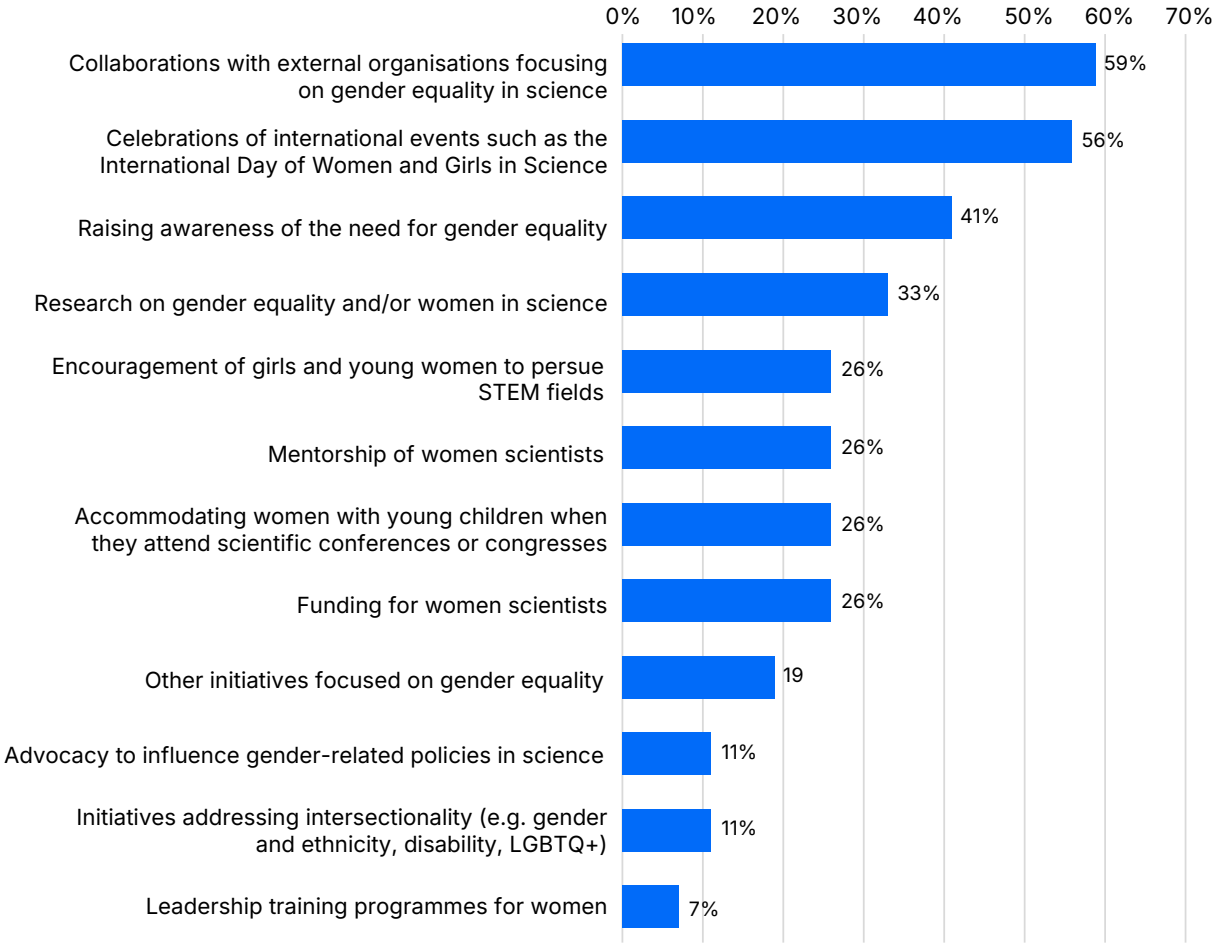


Figure 23. Formal gender-related initiatives at international scientific unions (n = 27)

CASE STUDY 6

Scientific Committee on Antarctic Research: early-career research fellowships with consideration for caregiving responsibilities

Antarctic research operates in an exceptionally demanding environment, characterized by international mobility, extended fieldwork and long periods spent in remote locations. These structural conditions tend to exacerbate existing gender inequalities observed across academia, particularly at later career stages. While women are well represented among early-career researchers in polar science – accounting for approximately 55% of early-career members within the Association of Polar Early Career Scientists (APECS) - their representation declines with seniority. Since 2024, women hold two of five positions in the governing Executive Committee of the Scientific Committee on Antarctic Research (SCAR).

Gender equality in Antarctic research is addressed through a closely connected ecosystem of organizations led by SCAR and the work of its Equality, Diversity and Inclusion (EDI) Action Group (AG) focusing on coordination, priority-setting and policy-relevant advice.

The SCAR EDI AG works alongside APECS (supporting early-career researchers across both the Antarctic and Arctic), Women in Polar Science Network (hosted by SCAR), and many other national and international polar EDI initiatives. While institutionally distinct, these bodies coordinate their efforts and share a commitment to advancing EDI principles in polar science.

Approach and practices

Since the 2000s, SCAR has maintained a commitment to gender equality and broader inclusivity, supported by general policies. Recognising the need, SCAR set up a dedicated EDI Action Group since 2020, to provide ongoing advice and support. Rather than branding individual actions as stand-alone 'initiatives', SCAR has embedded EDI principles into its core work in Antarctic scientific coordination, and in SCAR hosted conferences.

A relevant example is SCAR's research fellowship programme, which is explicitly designed to support early-career researchers. Fellowships provide targeted financial support to extend research activity – such as enabling additional months of work or participation in complementary projects – thereby strengthening research outputs and professional visibility. Fellowship recipients are required to publish their findings, reinforcing both scientific quality and career progression.

Crucially, while eligibility criteria include an age limit, SCAR applies flexibility for applicants whose research trajectories have been interrupted due to childcare or comparable family responsibilities. Periods of reduced research activity linked to caregiving are explicitly taken into account in the assessment process, with the aim of preserving equitable access to career-shaping opportunities. In this context, ensuring continuity of research careers for early-career scientists, including those with caregiving responsibilities, has been identified as a critical leverage point for improving longer-term gender balance in leadership and recognition.

Facilitating participation in a constrained research environment

Beyond fellowships, SCAR and its associated networks have supported or drawn lessons from practices aimed at reducing structural barriers to participation. While set up initially in the Arctic, virtual and remote access to field sites is now also being developed by some SCAR Member programs to allow researchers to participate when on-site presence is not feasible. This includes options whereby field staff at research stations also collect samples on behalf of such researchers.

Beyond fieldwork, the SCAR EDI Action Group has provided a set of good practice recommendations for SCAR hosted activities, both in-person and online meetings and conferences. Some of these include provision of hybrid access, access to guidance documents and code of conduct for the event in different languages, support for caregivers, travel support for economically disadvantaged groups.

Ongoing challenges

Despite this progress, persistent issues remain. Cultural differences in international research teams can create uneven working environments, and practical constraints – such as the limited availability of gender-appropriate protective clothing, non-accessible research stations for mobility or visual impairment – continue to affect participation in fieldwork.

Nonetheless, SCAR's sustained emphasis on equality of opportunity and access has positioned inclusivity as a core organizational principle rather than a peripheral concern.

Key takeaways for other institutions

- **Research fellowships can be designed to support early-career development**, and can explicitly recognize career interruptions linked to childcare or family responsibilities.
- **Eligibility criteria and assessment frameworks can adapt to account for non-linear career paths** without lowering standards of scientific quality.
- **Identifying structural constraints specific to the research context** is an opportunity to develop alternative modes of participation, such as remote access to data or facilitated fieldwork.
- **Inclusivity should be an embedded organizational practice**, integrated into core programmes and governance, rather than a collection of isolated initiatives.

Institutional challenges faced by unions in pursuing gender equality

Unions identified lack of gender-disaggregated data as the most significant challenge to advancing gender equality, with approximately three quarters reporting that this issue applies to their organization to a large or some extent (Figure 24). Limited institutional support, including constraints related to funding, staffing or organizational commitment, was identified as a major challenge by half of the unions.

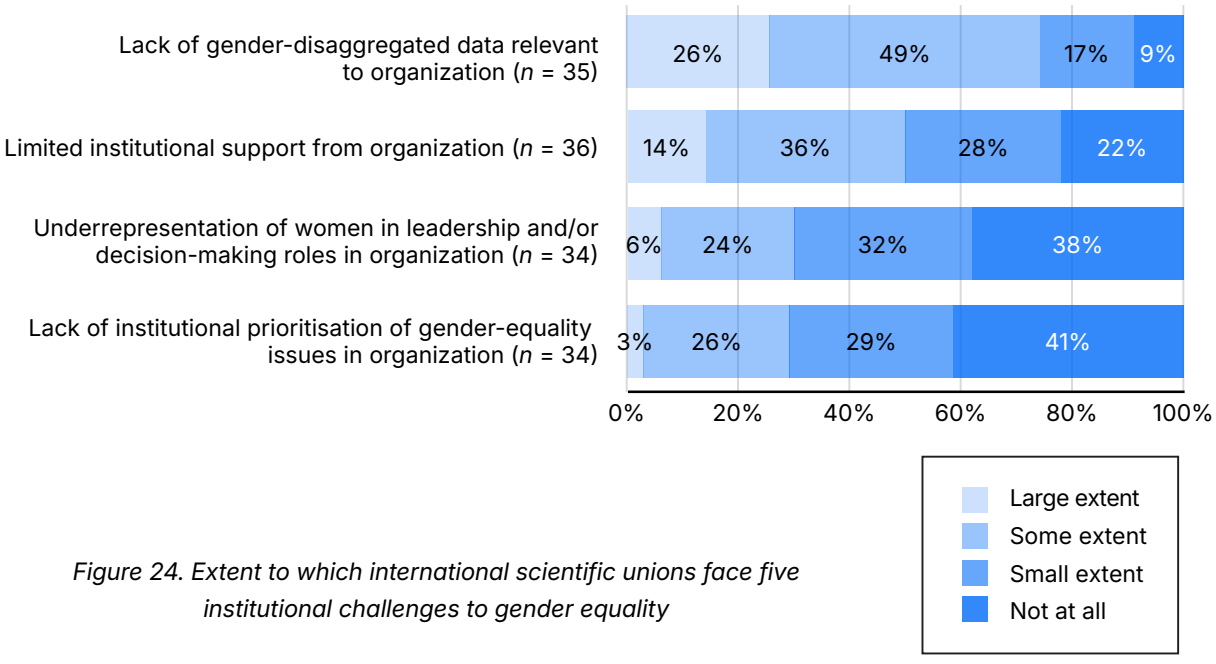


Figure 24. Extent to which international scientific unions face five institutional challenges to gender equality

Results from the individual survey

Drawing on responses from 598 scientists worldwide, this section examines gender differences in access, participation and progression within scientific organizations. It complements the institutional findings by documenting how scientists describe their experiences within these organizations, and where gender-related differences emerge across disciplines and organizational contexts.

OVERVIEW OF THE RESPONDENT SAMPLE

A total of 811 individuals responded to the survey. Gender-disaggregated analyses were conducted on a subset of 598 respondents who provided sufficiently complete and reliable data and consented to report their gender. Within this analytical sample, women represented 59.4% (*n* = 355) of respondents, while men accounted for 40.6% (*n* = 243).

The sample largely reflects mid- to late-career scientists: nearly three quarters of respondents were aged between 35 and 64, and over half occupied senior career stages with more than 15 years of experience post-PhD or equivalent.

Respondents represented a broad global spread, reporting nationalities across 83 countries. Europe constituted the largest regional group (37%), followed by Asia (22%) and Latin America (21%), with smaller shares in North America (7%), Oceania (7%) and Africa (6%); country of residence closely mirrored nationality patterns.

Available data from Our World in Data, the World Bank and UNESCO show that the world's scientific workforce is highly concentrated in Europe, Asia and North America, with China, the European Union and the United States accounting for the majority of researchers worldwide. In this context, Europe and Asia are broadly represented in the sample in line with their global prominence, whereas North America's representation, and the United States in particular, is relatively weak compared to its important role in the global research system. These patterns, together with uneven data availability across regions, limit the robustness of regionally disaggregated analyses and may underrepresent context-specific dynamics.

A large majority of respondents (93%) reported current or past involvement in scientific organizations. Respondents were distributed across national professional societies or disciplinary associations (28%), national academies of sciences (26%), and international scientific unions or disciplinary federations (26%), with the remainder affiliated with other types of organization. Most respondents (70%) were associated with discipline-based organizations, while approximately one quarter reported involvement in non-discipline-based bodies. The sample therefore reflects the perspectives of scientists who are engaged in scientific organizations, which aligns with the primary target population of the survey.

Respondents reported holding a range of roles within scientific organizations. Ordinary membership without active involvement accounted for around 24% of reported roles, followed by committee membership (20%) and leadership roles (19%). Smaller shares related to working group or task force membership (17%), board membership (14%), and advisory or expert contributor roles (6%). Overall, the sample includes perspectives from both general membership and governance and leadership positions.

The disciplinary profile of respondents was weighted towards mathematics (26%), followed by biological sciences (16%), physical sciences (12%), and earth and related environmental sciences (8%). Smaller proportions of respondents reported primary disciplines in chemical

sciences (5%), health sciences (4%), sociology (3%), computer and information sciences (2%), and political science (2%), with remaining disciplines each accounting for less than 2% of responses.

This uneven disciplinary distribution limits how far discipline-specific findings can be generalized across the full range of scientific fields represented within scientific organizations. The disciplinary patterns observed in the data are more likely to reflect differences in organizational structures and survey dissemination than differences in the relevance of gender equality issues across fields.

In terms of professional background, most respondents worked in universities (65%) or public research institutes (22%). Employment conditions were relatively stable: 70% of respondents reported permanent contracts and 84% worked full time, with no marked gender differences across contract type or working-time arrangements.

Finally, most respondents (63%) did not identify with any of the minority groups listed in the survey. Among those who did, the most frequently reported experiences included belonging to an ethnic, racial or national minority group; identifying as lesbian, gay, bisexual, transgender, queer, intersex or others (LGBTQI+); belonging to an Indigenous group; living in climate- or conflict-affected contexts; or having a disability. Across these categories, women respondents reported minority identities and experiences more frequently than men respondents. This pattern underscores the relevance of an intersectional perspective: evidence from the broader research literature consistently shows that gender-based inequalities in science are often intensified when combined with other axes of marginalization, resulting in compounded barriers to access, participation and recognition. In this context, future editions of the survey would benefit from more systematically capturing intersectional dimensions, as these are likely to shape experiences within scientific organizations in ways that cannot be understood through gender alone.

ACCESS PATHWAYS

This section examines perceptions of gender-related barriers at different stages of engagement in scientific organizations. **While gender is not commonly reported as a barrier to initial entry, informal mechanisms – including encouragement, networks, and nomination practices – emerge as important factors influencing women's continued participation and progression.**

Only a small minority of respondents reported encountering barriers to joining their organization (women: 12%; men: 8%) with the large majority indicating that they faced no barriers. Reported experiences varied slightly by region, but the number of cases was too small to draw robust conclusions regarding the influence of nationality or country of residence. Qualitative responses nonetheless highlighted the presence of structural and contextual barriers affecting a subset of respondents. These include resource and funding constraints, lack of institutional support or active opposition, and experiences of gendered, political or social bias. Respondents also described gatekeeping practices linked to opaque

nomination processes and entrenched hierarchies, as well as administrative and procedural barriers that limited accessibility. While not widespread, these themes point to systemic factors that may disproportionately affect certain groups, depending on context.

By contrast, barriers to progression or recognition within scientific organizations were reported far more frequently, particularly by women. Women (31%) were approximately three times more likely than men (10%) to report such barriers. This pattern was consistent across disciplines and organization types. Reported barriers were lowest in the health, medical, agricultural and veterinary sciences (14%), moderate in the natural and engineering sciences (21%), and highest in the social sciences and humanities (30%). Across all fields and organizational contexts – including international scientific unions, national academies and national professional societies – women were consistently more likely than men to report barriers to participation, progression or recognition, indicating a persistent gender gap after initial access.

Beyond formal entry criteria, the survey examined how informal access pathways, such as encouragement and support, shape decisions to join scientific organizations. Gender differences were particularly evident in this area, highlighting the role of informal support mechanisms in shaping access to scientific organizations.

The great majority of respondents reported being encouraged to join their scientific organization, with similar proportions among women (80%) and men (75%). For men, encouragement most often came from other men, with 74% of men reporting that they were encouraged by peers who were men. For women, encouragement came from men for 58% of them but also from women for 39% of them, pointing to the importance of women's networks.

These patterns are likely shaped by existing gender imbalances in senior and influential positions within scientific organizations, including roles involved in nomination and recruitment. It suggests that these processes may be shaped by men-dominated professional networks, reinforcing same-gender patterns of nomination and support.

Women were also significantly more likely than men to place strong weight on encouragement in their decision to join, more frequently describing it as "very important" (44%) or "essential" (23%). By contrast, men most commonly rated encouragement as "moderately important" (34%), suggesting that informal support networks may be more decisive for women's access than for men's.

Some gender differences emerge in the timing of entry into scientific organizations. Overall, responses show a relatively even distribution across career stages, with around one fifth of participants reporting first involvement at each stage, from student to senior level. Women were slightly more likely to join at the mid-career (24% versus 18%) and doctoral stages (22% versus 17%), while men were somewhat more likely to join at the student stage (21% versus 14%). These modest differences may reflect variations in access or encouragement at earlier career stages.

PARTICIPATION, LEADERSHIP AND RECOGNITION

While formal access to scientific organizations appears broadly similar for women and men, clearer gender differences emerge once individuals are engaged within these organizations. Across the multiple dimensions of participation, recognition and leadership the data show gendered patterns of experience, although their forms and intensity vary by organizational context and by the specific mechanisms involved.

Involvement and roles held

Overall, men were somewhat more likely than women to hold leadership or governance roles within their scientific organizations (40% of men compared to 32% of women). **This gender gap was broadly consistent across disciplines but varied markedly by organization type.** The percentage of men holding leadership or governance roles was relatively stable across organizational contexts (ranging from 39% to 45%), whereas for women this varied substantially (from 14% to 50%). Women's representation in leadership was highest in international scientific unions or disciplinary federations (50%) and lowest in national academies (14%), indicating that women's access to leadership is strongly shaped by organizational context rather than discipline alone.

Patterns of involvement within scientific organizations were otherwise broadly similar for men and women. Most respondents reported that their roles were voluntary (men: 76%; women: 74%), while a slightly higher proportion of women (26%) than men (23%) reported holding roles that were fully or partially compensated.

Respondents generally viewed scientific organizations as offering opportunities for growth and progression. Overall, six in ten reported that such opportunities were available to at least some extent, most commonly describing them as available "to some extent" (30%) and less frequently as available "to a large" (23%) or "very large" extent (7%).
Men and women reported broadly similar patterns, though their assessments differed slightly in emphasis. Men were more likely to describe opportunities as available "to a large extent," while women more often characterised them as available only "to some extent."
Qualitative responses reinforced the perceived value of participation in scientific organizations, with respondents most frequently citing professional development, networking, increased visibility, leadership opportunities, skills development, and access to resources. At the same time, a smaller number highlighted constraints and inequities – such as unpaid workloads or lack of recognition – indicating that opportunities for growth are not experienced equally across all contexts.

Participation and progression

Gender differences emerged strongly in relation to participation and progression. Women were three times more likely than men to report experiencing barriers within their scientific organizations (31% compared to 10%).

Constraints on participation also emerged as a common issue. Just over one third of respondents (35%, *n* = 118) reported having declined or missed opportunities offered by their organization, with women doing so slightly more often than men (38% compared to 32%).

Among respondents who missed opportunities, the most frequently cited reasons were lack of funding or travel support, followed by care responsibilities. Women accounted for 59% of responses citing lack of funding or travel support and 82% of responses citing care responsibilities, indicating that women were approximately 4.5 times more likely than men to report care-related constraints. This gender gap was particularly pronounced in the health, medical, agricultural and veterinary sciences (where care-related constraints were reported by 44% of women and 0% of men) and in the natural and engineering sciences (reported by 38% of women and 12% of men). By contrast, in the social sciences and humanities, men reported higher levels of care-related constraints than women (43% compared to 25%).

Despite disparities in progression and available opportunities, men and women reported similar perceptions of the career benefits gained from their participation in scientific organizations. For both genders, the most common response was that involvement benefited their career "to some extent" (women 39%; men 36%). Comparable proportions of men (46%) and women (45%) rated the benefit as "large" or "very large", while only a small minority reported no benefit (men 7%; women 3%).

Discrimination and harassment

Gender differences were evident in experiences of discrimination and harassment within scientific organizations. Women were significantly more likely than men to report having experienced at least one incident (24% compared to 10%), making them approximately 2.5 times more likely to report such experiences. This gender effect remained significant when controlling for discipline. Among respondents who reported at least one incident, the average number of incidents reported was broadly similar across fields, though slightly higher in the natural and engineering sciences (mean = 2.9 incidents) than in the health, medical, agricultural and veterinary sciences (mean = 2.6) and the social sciences and humanities (mean = 2.4). Within each disciplinary group, women consistently reported a higher average number of incidents than men.

Across all categories of discrimination and harassment, women accounted for the majority of reported experiences. They represented 83% of reports of having contributions ignored, downplayed, or credited to others (*n* = 42), 78% of microaggressions (*n* = 36), 80% of being asked to perform invisible labour (*n* = 30), and 79% of resistance encountered when advocating for gender or equity issues (*n* = 29). Women were also overwhelmingly represented among reports of being overlooked for roles or leadership opportunities (89%, *n* = 28), verbal harassment (81%, *n* = 26), explicit gender-based discrimination (84%, *n* = 25), and facing higher expectations or scrutiny compared to peers (75%, *n* = 24).

Despite the reported occurrence of discrimination and harassment, formal reporting within organizations remained limited. Among respondents who had experienced such incidents, a majority reported not raising them through formal channels (51%), compared with 43% who did. Reporting rates were similar for women and men, although women were slightly less likely to report incidents (42% compared to 46% for men).

Perceptions of the trustworthiness of organizational reporting mechanisms differed by gender. Overall, just over half of respondents (51%, *n* = 121) agreed or strongly agreed that their organization has a safe and trusted mechanism for reporting misconduct. Men were more likely than women to express confidence in these mechanisms (59% compared to 45%), while women more frequently reported uncertainty about the reliability of such mechanisms, selecting "do not know" as an answer (20% compared to 12%). Together, these findings point to gendered differences not only in experiences of discrimination, but also in confidence in organizational mechanisms intended to address misconduct.

PERCEPTIONS OF DIVERSITY, FAIRNESS AND TRANSPARENCY

The survey examined perceptions of organizational culture and inclusion, focusing on gender differences in assessments of diversity, fairness and transparency within scientific organizations. **While overall perceptions of diversity and fairness were broadly similar among men and women, women consistently reported lower levels of gender diversity and transparency in selection and nomination processes across disciplines.**

Diversity and representation

Respondents were asked to rate how well different types of diversity were represented within their organization's leadership, committees and events – namely, the survey asked about representation of different scientific disciplines, different regions or countries, different types of institutions (e.g. large universities, smaller institutions, research centres), career stages (e.g. early-career, senior), gender, other groups (e.g. based on ethnicity, disability, language). Overall, perceptions of diversity showed similar distributions among men and women, but with some descriptive differences. Men were more likely than women to perceive diversity as existing "to a very large extent" (28% of men compared to 22% of women), while women more frequently selected intermediate or lower response categories, such as "to some extent" (31% of women compared to 24% of men) or "to a small extent" (14% of women compared to 9% of men). **This pattern seems to indicate a tendency for men to view their organizations as more diverse overall, even though aggregate differences were not statistically significant.**

This trend was further confirmed when respondents were asked to assess gender diversity specifically. Statistical testing showed that women rated gender diversity within their organizations significantly lower than men (Mann–Whitney U = 4249.5, p = 0.032). **This finding suggests a perceptual gap**: while overall assessments of diversity are broadly similar across genders, women are more likely to identify underrepresentation when the focus is explicitly on gender, whereas men more often perceive gender balance as having

been achieved. This difference likely reflects divergent experiences within organizations, with women more frequently exposed to gender-related barriers or exclusion, and men less often encountering or recognizing such dynamics.

Fairness and transparency

Men and women expressed broadly similar views on whether individuals in their organizations are fairly recognized for their contributions. The most common responses were "to some extent" (36% for both) and "to a large extent" (42% of men; 39% of women), while both the most and least favourable responses were relatively rare (≤ 12%).

However, clear differences appeared in perceptions of transparency in selection and nomination processes. Overall, 66% of men rated these processes as transparent, compared to 56% of women. Perceptions also varied significantly by discipline for both genders, with transparency rated highest in the health, medical, agricultural and veterinary sciences (77%) and lower in the social sciences and humanities (62%) and the natural and engineering sciences (56%).

Within each discipline, men consistently reported higher levels of perceived transparency than women. The largest gender gap was observed in the social sciences and humanities (81% of men compared with 62% of women), followed by the health, medical, agricultural and veterinary sciences (81% versus 69%), and then the natural and engineering sciences (61% versus 52%).

Taken together, these findings indicate that gender inequality in scientific organizations is less about access at the point of entry than about cumulative disadvantages embedded in informal practices, organizational cultures, and governance structures. While participation in scientific organizations is widely perceived as valuable by both women and men, the conditions under which participation translates into recognition, leadership, and influence remain uneven. Addressing these gaps will therefore require attention not only to representation, but also to the informal and structural mechanisms that shape progression, visibility, and power within scientific organizations.

Conclusion

While efforts to advance gender equality in science have gained ground, progress remains uneven. The barriers documented in this report are not limited to institutional procedures. They reflect deeper patterns: who is seen, supported and recognized, and whose contributions are valued.

Scientific organizations do not exist separately from the science system they belong to or the societies they serve. The gaps highlighted in this report are not the result of isolated shortcomings, but of broader social and institutional dynamics, both formal and informal, that continue to shape representation, participation and recognition in science.

These challenges are not unique to gender. They intersect with broader structural features of the scientific system, including disciplinary and regional hierarchies, the underrepresentation of scientists from countries with limited research funding and infrastructure, the marginal position of early-career researchers, and evaluation models that prioritize competition over collaboration. Addressing gender inequality can be a point of entry into broader reform, in order to strengthen the openness, inclusiveness and trustworthiness of science as a whole.

Many organizations are already taking meaningful steps and succeeding. The evidence presented here confirms that progress is not only possible, but already under way. The findings and recommendations in this report are intended to support and generalize that trend. The path forward will differ across institutions, but the direction is shared: towards a scientific community in which participation reflects the full diversity of talent. This report is offered as a resource to support that effort – through reflection, peer exchange and continued learning.

At the same time, efforts to advance gender equality now face growing and compounding pressures. In some countries, gender-related policies and research are increasingly portrayed as ideological. Diversity and inclusion programs are being challenged, or scaled back, particularly where they involve targeted support for women or underrepresented groups. These developments risk slowing, and even reversing, progress. Scientific organizations have both the mandate and the means to lead by example. In the current context, leadership matters more than ever.

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Annexes

Annex 1: Percentage of women among members of national academies, by survey year

ACADEMY	COUNTRY	PERCENTAGE WOMEN		
		2025	2020	2015
Academy of Sciences of Albania	Albania	15%		
Academia Nacional de Ciencias	Argentina		15%	
National Academy of Sciences of the Republic of Armenia	Armenia	5%		
Academy of the Social Sciences in Australia	Australia	38%		
Australian Academy of Science	Australia	21%	15%	10%
Austrian Academy of Sciences	Austria	24%	16%	13%
Bangladesh Academy of Sciences	Bangladesh		9%	7%
Koninklijke Academie voor Geneeskunde van België	Belgium		31%	
Koninklijke Academie voor Nederlandse Taal en Letteren	Belgium		26%	
Koninklijke Vlaamse Academie van België voor Wetenschappen en Kunsten	Belgium	28%	24%	
The Royal Academies for Science and the Arts of Belgium	Belgium		17%	
Académie Nationale des Sciences, Arts et Lettres du Bénin	Benin	5%		
Academia Nacional de Ciencias de Bolivia	Bolivia	25%		
Academy of Sciences and Arts of Bosnia and Herzegovina	Bosnia and Herzegovina	17%	16%	15%
Brazilian Academy of Sciences	Brazil	22%	15%	13%
National Academy of Medicine of Brazil	Brazil		5%	
Bulgarian Academy of Sciences	Bulgaria	8%		
Cameroon Academy of Sciences	Cameroon		13%	11%
Royal Society of Canada	Canada		25%	16%
Chilean Academy of Sciences	Chile		15%	12%
Academia Colombiana de Ciencias Exactas, Físicas y Naturales	Colombia	18%	17%	14%
National Academy of Sciences	Costa Rica	30%		
Croatian Academy of Sciences and Arts	Croatia		11%	10%
Cuban Academy of Sciences	Cuba	39%	33%	27%
Cyprus Academy of Sciences, Letters, and Arts	Cyprus	13%		
Czech Academy of Sciences	Czech Republic		45%	24%
Académie Congolaise des Sciences	Democratic Republic of the Congo	4%		
Academia de Ciencias de la República Dominicana	Dominican Republic		14%	13%
Academia de Ciencias del Ecuador	Ecuador	26%		
Academy of Scientific Research and Technology	Egypt		21%	
Estonian Academy of Sciences	Estonia		8%	
Ethiopian Academy of Sciences	Ethiopia		9%	5%
Académie des Sciences	France	18%	17%	8%

ACADEMY	COUNTRY	PERCENTAGE WOMEN		
		2025	2020	2015
Georgian National Academy of Sciences	Georgia	7%	11%	8%
Berlin-Brandenburg Academy of Sciences and Humanities	Germany		17%	
German National Academy of Sciences Leopoldina	Germany	20%	14%	10%
Ghana Academy of Arts and Sciences	Ghana		14%	11%
Academia de Ciencias Medicas, Físicas y Naturales de Guatemala	Guatemala		23%	12%
National Academy of Sciences of Honduras	Honduras		29%	17%
Hungarian Academy of Sciences	Hungary	10%	8%	5%
Indian National Science Academy	India		9%	6%
Academy of Sciences of the Islamic Republic of Iran	Iran		3%	
The Iranian Academy of Medical Sciences	Iran		12%	
Royal Irish Academy	Ireland	26%	18%	14%
Academy of Sciences and Humanities	Israel	18%	13%	
Accademia Nazionale dei Lincei	Italy	15%	10%	5%
Science Council of Japan	Japan	38%	28%	17%
Kenya National Academy of Sciences	Kenya	19%		
Latvian Academy of Sciences	Latvia	25%	20%	18%
Lebanese Academy of Sciences	Lebanon		24%	
Lithuanian Academy of Sciences	Lithuania	11%	7%	
Academy of Sciences Malaysia	Malaysia		19%	15%
Mauritius Academy of Science and Technology	Mauritius	33%		
Academia Mexicana de Ciencias	Mexico		25%	23%
Academy of Sciences of Moldova	Moldova	16%		
Mongolian Academy of Sciences	Mongolia	11%	5%	5%
Montenegrin Academy of Sciences and Arts	Montenegro	8%		
Nepal Academy of Science and Technology	Nepal	34%		
Royal Netherlands Academy of Arts and Sciences	Netherlands		17%	14%
Royal Society of New Zealand Te Apārangi	New Zealand	31%	16%	9%
Nicaraguan Academy of Sciences	Nicaragua		28%	23%
Nigerian Academy of Science	Nigeria	11%	10%	9%
Macedonian Academy of Sciences and Arts	North Macedonia		10%	
Norwegian Academy of Science and Letters	Norway		20%	
Palestine Academy for Science and Technology	Palestine		8%	7%
Academia Nacional de Ciencias	Peru		20%	20%
National Academy of Science and Technology, Philippines	Philippines	21%		
Polish Academy of Sciences	Poland	15%		
Academy of Medical Sciences of Romania	Romania		10%	
Romanian Academy	Romania	13%		
Serbian Academy of Sciences and Arts	Serbia	18%	13%	9%
Singapore National Academy of Science	Singapore	9%	11%	
Slovenian Academy of Sciences and Arts	Slovenia		8%	5%
Academy of Science of South Africa	South Africa		27%	24%

ACADEMY	COUNTRY	PERCENTAGE WOMEN		
		2025	2020	2015
The Korean Academy of Science and Technology	South Korea		7%	
The National Academy of Sciences	South Korea	2%	2%	
Real Academia de Ciencias Exactas, Físicas y Naturales de España	Spain	24%		
National Academy of Sciences of Sri Lanka	Sri Lanka	20%	21%	18%
Sudanese National Academy of Sciences	Sudan	9%		
Royal Swedish Academy of Sciences	Sweden	20%	15%	13%
Academia Sinica	Taiwan		11%	
Tanzania Academy of Sciences	Tanzania		12%	4%
Pontifical Academy of Sciences	The Vatican	28%		
Bilim Akademisi	Turkey	23%		
Turkish Academy of Sciences	Turkey	10%		
National Academy of Sciences of Ukraine	Ukraine	11%		
Academy of Medical Sciences	United Kingdom	23%	19%	
The Royal Society	United Kingdom	14%	10%	6%
National Academy of Medicine	United States of America		28%	
The National Academy of Sciences	United States of America		9%	13%
Academy of Sciences of the Republic of Uzbekistan	Uzbekistan	5%		
Academia de Ciencias Físicas, Matemáticas y Naturales de Venezuela	Venezuela		31%	14%
Zimbabwe Academy of Sciences	Zimbabwe		11%	

Annex 2: Percentage of women among members of national young academies, by survey year

ACADEMY	COUNTRY	PERCENTAGE WOMEN		
		2025	2020	2015
Young Academy of Belgium	Belgium		51%	
Cameroon Academy of Young Scientists	Cameroon		23%	
College of New Scholars, Artists and Scientists of the Royal Society of Canada	Canada	57%		
Academia Joven de Colombia	Colombia	45%		
Academie des Sciences pour les Jeunes en République Démocratique du Congo	Democratic Republic of the Congo		15%	
Young Academy Finland	Finland		55%	
Die Junge Akademie	Germany		44%	
Ghana Young Academy	Ghana	37%		
Hungarian Young Academy	Hungary		50%	
Indian National Young Academy of Science	India	29%		
Young Academy of India	India	44%		
Young Academy of Ireland	Ireland	58%		
Association of Latvian Young Scientists	Latvia		48%	
Nigerian Young Academy	Nigeria	23%	16%	
National Academy of Young Scientists	Pakistan		55%	
Polish Young Academy	Poland	38%	44%	
South African Young Academy of Science	South Africa		57%	
Young Academy of Spain	Spain	50%		

Annex 3: Percentage of women among members of global or regional academies, by survey year

ACADEMY	COUNTRY	PERCENTAGE WOMEN		
		2025	2020	2015
The World Academy of Sciences	Italy	19%	14%	10%
Academy of Sciences, Arts and Cultures of Africa and African Diasporas	Ivory Coast	17%		
Islamic World Academy of Sciences	Jordan	19%	13%	9%
The African Academy of Sciences	Kenya	21%		
Caribbean Academy of Sciences	Trinidad and Tobago	40%	27%	26%

Annex 4: Percentage of women among members of global or regional young academies, by survey year

ACADEMY	COUNTRY	PERCENTAGE WOMEN		
		2025	2020	2015
Global Young Academy	Germany	52%	45%	
Young Academy of Europe	Germany	43%	44%	
TWAS Young Affiliates Network	Italy	40%		

Annex 5: International scientific unions participating in 2025, compared with 2020

SURVEY YEAR		ORGANISATION
2025	2020	
		Association for Computing Machinery (ACM)*
		International Arctic Science Committee (IASC)
		International Arctic Social Sciences Association (IASSA)
		International Association of Legal Science (IALS)
		International Brain Research Organization (IBRO)
		International Cartographic Association (ICA)
		International Commission for Acoustics (ICA)
		International Commission for Optics (ICO)
		International Commission on Illumination (CIE)
		International Council for Industrial and Applied Mathematics (ICIAM)*
		International Council for Laboratory Animal Science (ICLAS)
		International Council for Scientific and Technical Information (ICSTI)
		International Federation of Library Associations and Institutions (IFLA)
		International Geographical Union (IGU)*
		International Mathematical Union (IMU)*
		International Peace Research Association (IPRA)
		International Political Science Association (IPSA)*
		International Society for Digital Earth (ISDE)
		International Society for Photogrammetry and Remote Sensing (ISPRS)
		International Society for Porous Media (INTERPORE)
		International Sociological Association (ISA)
		International Statistical Institute (ISI)
		International Studies Association (ISA)
		International Union for Physical and Engineering Sciences in Medicine (IUPESM)
		International Union for Pure and Applied Biophysics (IUPAB)
		International Union for the History and Philosophy of Science and Technology (IUHPST)*
		International Union for the Scientific Study of Population (IUSSP)
		International Union for Vacuum Science Technique and Applications (IUVSTA)
		International Union of Anthropological and Ethnological Sciences (IUAES)
		International Union of Basic and Clinical Pharmacology (IUPHAR)
		International Union of Biochemistry and Molecular Biology (IUBMB)*

SURVEY YEAR		ORGANISATION
2025	2020	
		International Union of Biological Sciences (IUBS)*
		International Union of Clinical and Basic Pharmacology (IUPHAR)
		International Union of Crystallography (IUCr)*
		International Union of Forest Research Organizations (IUFRO)
		International Union of Geodesy and Geophysics (IUGG)
		International Union of Geological Sciences (IUGS)*
		International Union of Immunological Societies (IUIS)*
		International Union of Materials Research Societies (IUMRS)*
		International Union of Physiological Sciences (IUPS)
		International Union of Psychological Science (IUPsyS)*
		International Union of Pure and Applied Chemistry (IUPAC)*
		International Union of Pure and Applied Physics (IUPAP)*
		International Union of Radio Science (URSI)
		International Union of Soil Sciences (IUSS) *
		International Union of Speleology (UIS)*
		International Water Association (IWA)
		Scientific Committee on Antarctic Research (SCAR)*
		Scientific Committee on Oceanic Research (SCOR)*
		Scientific Committee on Solar-Terrestrial Physics (SCOSTEP)
		Society for Social Studies of Science (4S)
		The International Commission for Optics (ICO)
		World Anthropological Union (WAU)*

An asterisk (*) indicates SCGES partner unions in 2025.

Annex 6: Institutional survey template for academies

REPRESENTATION AND PARTICIPATION OF WOMEN SCIENTISTS IN ACADEMIES OF SCIENCE, MEDICINE AND ENGINEERING, AND YOUNG ACADEMIES

GENERAL

1. What is the name of your academy?

2. In which country is the secretariat of your academy located?

MEMBERS

A 'member' represents any person who is elected to the academy. Some academies may use the term 'fellow' instead. In this section, we use the term 'member' to refer to both. Please include only full members/fellows and exclude honorary/associate members unless otherwise specified.

3. How many members does your academy currently have and how many of them are women?

	Number
Total number of members	
Number of members who are women	

4. Which ONE of the following statements best describes your academy?

Academy admits members from all fields / disciplines	
Academy admits members from selected fields / disciplines	

5. Each academy categorizes the scientific fields or disciplines in which its members work in its own way (e.g., Economics, Life Sciences, Mathematical Sciences).

   In the table below, please provide the following information:

   - **Column 1**: List the scientific fields or disciplines as they are categorized in your academy;
   - **Column 2**: Indicate the total number of members in your academy working in each field or discipline;
   - **Column 3**: Indicate the number of women members in each field or discipline.

   If there are no women members in a particular field or discipline, enter '0'.

Name of scientific field/discipline	Total number of members	Number of women members

6. Do members of your academy have to pay a membership fee?

Yes	
No	

Skip to Question 9

7. If yes to Question 6, does the membership fee vary by category?

Yes	
No	

Skip to Question 9

8. If yes to Question 7, please provide more detail on the categories of membership fees.

NOMINATION OF NEW MEMBERS

Nomination refers to the process of formally proposing candidates for membership in the academy. This is distinct from election, which is the process of selecting nominated candidates. ***This section focuses only on nominations****.*

9. Who may nominate new members to your academy? (Please select ALL that apply.)

Existing members nominate candidates	
Universities and scientific organisations nominate candidates	
A dedicated committee nominates candidates	
Self-nomination is allowed	
Other (Specify: .....)	

10. Do nominees have to meet specific criteria?

Yes	
No	

Skip to Question 14

11. If yes to Question 10, what are the criteria that nominees must meet? (Select ALL that apply.)

Minimum years of research experience	
Minimum number of research publications	
Demonstrated research excellence	
International recognition in their field	
Contributions to society or public engagement	
Recognition through prestigious awards or honours	
Leadership experience in the scientific community	
Other criteria (Specify: .....)	

12. How are the criteria communicated to potential new members? (Select ALL that apply.)

Published on the academy's website	
Shared in internal documents or guidelines	
Communicated informally through members	
Other (Specify: .....)	

13. Where can the official nomination criteria for new members be found? Please provide a web link to the criteria and/or upload relevant documents, if available.

	Insert the web link

→ *Upload document(s) here*

14. Does your academy keep records of the **nominees**?

Yes	
No	

Skip to Question 16

15. If yes to Question 14, how many individuals have been **nominated** per year in the period 2020 to 2024? And how many of them are women? (*We understand that you may not have the data to complete the entire table.*)

	Total number of individuals	Number of women
2024		
2023		
2022		
2021		
2020		

Write the numbers in the cells.

ELECTION OF NEW MEMBERS

'Election' is the process of formally selecting a nominated candidate for membership in the academy. It should not be confused with 'nomination', which is the process of formally proposing a candidate for election. ***This section focuses only on elections****.*

16. How are new members elected? (Select ALL that apply.)

Election by all members voting	
Election by a vote of a group of members	
Election by dedicated committee(s)	
Other (Specify: .....)	

17. Does your academy apply quotas in the election process? (Select ALL that apply.)

Yes, a gender quota	
Yes, an age quota	
Yes, a quota for disciplines	
Yes, a quota for institutions	
No quotas apply	
Other (Specify: .....)	

18. Does your academy keep records of those who are **elected**?

Yes	
No	

(Skip to Question 20)

19. How many individuals have been **elected** to the academy per year in the period 2020 to 2024? How many of them are women?

	Total number of individuals	Number of women
2024		
2023		
2022		
2021		
2020		

Write the numbers in the cells.

INITIATIVES TO INCREASE THE REPRESENTATION OF WOMEN AMONG THE ACADEMY'S MEMBERSHIP

20. Is your academy currently undertaking any initiatives specifically aimed at increasing women's representation among the membership of your academy?

Yes	
No	

Skip to Question 22

21. If yes to Question 20, please describe these initiatives. Alternatively, if the descriptions are available online, please provide the web links.

GOVERNANCE

The governing board (also referred to as the Executive Board, Council, or Leadership Team) is the highest decision-making body of an academy. It is composed of members responsible for setting strategic direction, formulating policy, and overseeing the operations and governance of the organization.

22. Which positions are included in the governing board of your academy?

	Yes	No
President		
President-elect		
Chair		
Vice-president(s)		
Co-chair(s)		
Secretary		
Treasurer		
Board members-at-large (general members with governance roles)		
Other positions (Specify: .....)		

23. How is the governing board elected or appointed? (Select ALL that apply.)

Elected by all academy members	
Elected by a subgroup of members	
Appointed by an external authority	
Other (Specify: .....)	

24. Is the president (or equivalent) of your academy a man or a woman?

Man	
Woman	

25. Currently, how many vice-presidents and/or co-chairs does your academy have in total and how many of them are women?

	Number
Total number of vice-presidents and/or co-chairs	
Number of vice-presidents and/or co-chairs who are women	

26. Does your academy make use of committees, task forces and/or working groups to carry out its work?

Yes	
No	

Skip to Question 30

27. If yes to Question 26, how many committees, task forces, or working groups are currently active in your academy?

Write number

28. Does your academy keep records of the gender composition of its committees, task forces, and working groups?

Yes	
No	

Skip to Question 30

29. If yes to Question 28, how many individuals currently serve on these structures and how many of them are women?

	Number
Total number of individuals	
Number of women	

GENERAL ASSEMBLY

30. Does your academy keep records of the percentage of women among the delegates to its general assembly?

Yes	
No	

Skip to Question 32

31. If yes to Question 30, what was the percentage of women among delegates at your academy's most recent general assembly?

Write percentage

32. Did your academy apply any guidelines, targets, or initiatives to promote more balanced gender representation among delegates to its most recent general assembly?

Yes	
No	

Skip to Question 34

33. If yes to Question 32, please describe the initiatives. Alternatively, if the relevant policies or materials are available online, please provide the web links.

GOVERNING DOCUMENTS, POLICIES AND STRATEGIES

34. Which of the following issues are explicitly mentioned in your academy's governing documents (e.g., constitution, by-laws, or statutes)? (Select ALL that apply.)

Diversity	
Diversity, equity and inclusion (DEI)	
Gender equality (or inequality)	
Women in science	
Gender mainstreaming	
Non-discrimination on the basis of gender	
Other similar issues relevant to gender (in)equality (Specify: .....)	
None of the above	

Skip to Question 36

35. Please provide a web link to the documents in which these issues are mentioned, and/or upload the documents if available.

Insert the web link

→ *Upload document(s) here*

36. Does your academy have any of the following policies, strategies and/or guidelines in place? (Select ALL that apply.)

A gender equality policy or statement (A document outlining the organisation's commitment to gender equality, guiding principles, and decision-making framework.)	
A gender equality strategy (A structured, long-term plan with specific objectives and actions to promote gender equality.)	
A general diversity, equity, and inclusion (DEI) policy (A broad policy covering diversity, including but not limited to gender, race, ethnicity, disability, and other factors. Note: This policy must at least mention gender.)	
A policy or guidelines addressing gender-based discrimination and harassment (Includes measures to prevent and address gender-based discrimination, sexual harassment, and other forms of misconduct.)	
A policy or guidelines addressing unconscious bias in decision-making (Guidance for recognising and mitigating unconscious biases in hiring, promotions, nominations, and leadership selection. Note: This policy must at least mention gender.)	
A mechanism for reporting and addressing gender-related complaints (A structured process for reporting and resolving gender-based discrimination or harassment concerns.)	
Other similar policies, strategies and/or guidelines relevant to gender equality. (Specify: .....)	
None of the above	

37. Does your academy currently have any of the following structures with a specific mandate to drive change in the area of gender equality?

	Yes	No
A permanent committee or sub-committee		
An ad hoc (non-permanent) working group, task force or action group		

If no to BOTH, skip to Question 41

38. If yes to any of the options in Question 37, please provide the name(s) of the relevant structure(s).

A permanent committee or sub-committee	
An ad hoc (non-permanent) working group, task force or action group	

39. If available, please provide a web link where more information about these structures can be found. Alternatively, and if available, you may also upload relevant documents about these structures.

	Insert the web link
→	*Upload document(s) here*

40. Do the structures in Question 37 have sufficient resources to fulfil their mandate?

	Yes, they have sufficient resources	No, although they have some resources, these are insufficient	No, they have no resources
A permanent committee or sub-committee			
An ad hoc (non-permanent) working group, task force or action group			

GENDER EQUALITY BUDGET

41. Does your academy have the following budgets?

	Yes	No
A specific budget for gender equality		
A budget for diversity issues that include gender		

If no to BOTH, skip to Question 43

42. If your academy has a specific budget for gender equality or diversity, what percentage of your academy's total budget did it represent in the most recent financial year?

Write percentage

DEALING WITH GENDER-RELATED COMPLAINTS

43. Does your academy have its own formal grievance mechanism for dealing specifically with gender-related complaints?

Yes	
No	

Skip to Question 45

44. If yes to Question 43, who at your academy is responsible for dealing with complaints about gender-related issues? (Select ALL that apply.)

The governing board	
A standing committee (e.g. an ethics committee)	
An ad-hoc committee	
A specific officer	
An ombudsperson	
Other (Specify: .....)	

45. Is/are there any national legal framework(s) your academy may use to deal with gender-related complaints?

Yes, and we use it when necessary	
Yes, but we do not use it or have not had a need to use it	
No, there is none	

AWARDS AND PRIZES

"Awards" and "prizes" here refer to tokens of recognition for scientific achievements, not research grants or funding.

46. Has your academy given out any awards or prizes in the period 2020 to 2024?

Yes	
No	

Skip to Question 49

47. If yes to Question 46, how many individuals have been nominated for your academy's awards or prizes in the **period 2020 to 2024** in total, and how many of the total number of individual nominees over that period are women?

	Number
Total number of individual **nominees**	
Number of **nominees** who are women	

48. How many individuals have been recipients of your academy's awards or prizes in the **period 2020 to 2024** in total, and how many of the total individual recipients over that period are women?

	Number
Total number of individual **recipients**	
Number of **recipients** who are women	

49. Does your academy offer any awards or prizes specifically recognizing women scientists?

Yes	
No	

Skip to Question 51

50. If yes to Question 49, how many awards or prizes specifically for women has your academy given out in the period 2020 to 2024 in total? As a single award or prize may have more than one individual recipient, please also confirm how many individual women have received these awards and prizes specifically for women.

	Number
Total number of awards or prizes specifically for women that were given out	
Number of women who received the awards and prizes specifically for women	

JOURNAL PUBLISHING

51. Does your academy publish scientific or scholarly journals?

Yes	
No	

Skip to Question 53

52. If yes to Question 51, does your academy keep records of the following?

	Yes	No	Don't know
Percentage of women among editors-in-chief			
Percentage of women among associate editors			
Percentage of women on the journal's advisory board			
Percentage of women among published authors			
Percentage of women among peer reviewers			

OTHER INITIATIVES

53. Does your academy currently have formal initiatives in place that focus on any of the following? (Select ALL that apply.)

Mentorship of women scientists	
Leadership training programmes for women	
Encouragement of girls and young women to pursue STEM fields	
Raising awareness of the need for gender equality	
Funding for women scientists	
Research on gender equality and/or women in science	
Advocacy to influence gender-related policies in science	
Collaborations with external organisations focusing on gender equality in science	
Accommodating women with young children when they attend scientific conferences or congresses	
Celebrations of international events such as the International Day of Women and Girls in Science	
Initiatives addressing intersectionality (e.g., gender and ethnicity, disability, LGBTQ+)	
Other initiatives focused on gender equality (Specify: .....)	

54. If you have more to say about any of the initiatives in Question 53, please provide additional information and the web link for each initiative in the space below.

55. Does your academy have webpages dedicated to gender equality or women in science?

Yes	
No	

(Skip to Question 57)

56. If yes to Question 55, please provide the web links:

EVALUATION AND MONITORING

57. Does your academy measure the effectiveness of its gender equality initiatives in any way?

Yes		
Not yet, but plans are in place to do so within the next year		*Skip to Question 59*
No		*Skip to Question 59*

58. If yes to Question 57, please briefly explain how you measure the effectiveness of your gender equality initiatives.

59. In the period 2020 to 2024, has your academy received any awards or recognition for any of its initiatives to promote gender equality?

Yes		
No		*Skip to Question 61*

60. If yes to Question 59, please provide details.

CHALLENGES

61. To what extent does your academy face the following institutional challenges to gender equality?

	Large extent	Some extent	Little extent	Not at all
Lack of gender-disaggregated data relevant to your academy (e.g., absence of data on membership, awards, leadership, or participation, which makes it difficult to identify and track issues)				
Lack of institutional prioritisation of gender-equality issues in your academy (e.g., reluctance within your academy to acknowledge and address gender-equality issues)				
Limited institutional support from your academy (e.g., insufficient funding, staff, or commitment to gender-equality initiatives)				
Underrepresentation of women in leadership and/or decision-making roles in your academy (e.g., few women in senior roles, governance structures, or key decision-making bodies)				
Other institutional challenges in your academy (Specify: .....)				

FINAL

62. Is there any other information that your academy would like to share, including comments on questions in this survey that you have struggled to understand and/or answer? If so, please provide this information in the space below.

63. We may follow up this survey with additional questions and/or interviews. Please check the appropriate box below to indicate if we may contact you again.

Contact us again if needed	
Do not contact us again	

THE END
THANK YOU FOR YOUR TIME AND EFFORT

Annex 7: Institutional survey template for international unions

REPRESENTATION AND PARTICIPATION OF WOMEN SCIENTISTS IN INTERNATIONAL SCIENTIFIC UNIONS, RESEARCH COUNCILS AND SCIENCE ASSOCIATIONS

GENERAL

1. What is the name of your union?

2. In which country is the secretariat of your union located or, if there is no secretariat, in which country is the union formally registered?

3. Which scientific field(s) or discipline(s) does your union represent?

4. Does your union have an estimate of the global percentage of women in the scientific field(s) or discipline(s) it represents?

Yes	
No	

Skip to Question 7

5. If yes to Question 4, what is the current, most reliable estimate (expressed as a percentage) for the scientific field(s) or discipline(s) your union represents?

Write percentage

6. Please explain the basis for the estimate provided above.

MEMBERS

7. Does your union have any individual members (i.e., persons and not regions, nations, or territories)?

Yes	
No	

Skip to Question 9

8. If yes to Question 7, how many individual members does your union currently have and how many of them are women?

	Number
Number of individual members	
Number of individual members who are women	

9. Does your union have any geographical members (i.e. regional/ national/ territorial members that are not individuals)?

Yes	
No	

Skip to Question 12

10. If yes to Question 9, does your union keep records of the number of individual members of its geographical members?

Yes	
No	

Skip to Question 12

11. If yes to Question 10, how many individual members do your geographical members currently have in total, and how many of them are women?

	Number
Total number of individual members of geographical members	
Number of individual members of geographical members who are women	

GOVERNING BODIES

12. What are the names of the governing bodies in your union?

	Write names of governing bodies

13. How many individuals currently serve on these governing bodies in total, and how many of them are women?

	Number
Total number of individuals serving on the governing bodies	
Number of women serving on the governing bodies	

GENERAL ASSEMBLY

14. Does your union have a general assembly?

Yes	
No	

Skip to Question 19

15. If yes to Question 14, does your union keep records of the percentage of women among the delegates to its general assembly?

Yes	
No	

Skip to Question 17

16. If yes to Question 15, what was the percentage of women among delegates at your union's most recent general assembly?

	Write percentage

17. Did your union apply any guidelines, targets, or initiatives to promote more balanced gender representation among delegates to its most recent general assembly?

Yes	
No	

Skip to Question 19

18. If yes to Question 17, please describe the initiatives. Alternatively, if the relevant policies or materials are available online, please provide the web links.

GOVERNING DOCUMENTS, POLICIES AND STRATEGIES

19. Which of the following are explicitly mentioned as issues in your governing documents (i.e., your constitution, by-laws and/or statutes)? (Select ALL that apply.)

Diversity		
Diversity, equity and inclusion (DEI)		
Gender equality (or inequality)		
Women in science		
Gender mainstreaming		
Non-discrimination on the basis of gender		
Other similar issues relevant to gender (in)equality (Specify: .....)		
None of the above		*Skip to Question 21*

20. Please provide a web link to the documents in which these issues are mentioned, and/or upload the documents if available.

	Insert the web link
→	*Upload document(s) here*

21. Does your union have any of the following policies, strategies and/or guidelines in place? (Select ALL that apply.)

A gender equality policy or statement (A document outlining the organisation's commitment to gender equality, guiding principles, and decision-making framework.)	
A gender equality strategy (A structured, long-term plan with specific objectives and actions to promote gender equality.)	
A general diversity, equity, and inclusion (DEI) policy (A broad policy covering diversity, including but not limited to gender, race, ethnicity, disability, and other factors. Note: This policy must at least mention gender.)	
A policy or guidelines addressing gender-based discrimination and harassment (Includes measures to prevent and address gender-based discrimination, sexual harassment, and other forms of misconduct.)	
A policy or guidelines addressing unconscious bias in decision-making (Guidance for recognising and mitigating unconscious biases in hiring, promotions, nominations, and leadership selection. Note: This policy must at least mention gender.)	
A mechanism for reporting and addressing gender-related complaints (A structured process for reporting and resolving gender-based discrimination or harassment concerns.)	
Other similar policies, strategies and/or guidelines relevant to gender equality. (Specify: .....)	
None of the above	

22. Does your union currently have any of the following structures with a specific mandate to drive change in the area of gender equality?

	Yes	No
A permanent committee or sub-committee		
An ad hoc (non-permanent) working group, task force or action group		

If no to BOTH, skip to Question 26

23. If yes to any of the options in Question 22, please provide the name(s) of the relevant structure(s).

A permanent committee or sub-committee	
An ad hoc (non-permanent) working group, task force or action group	

24. If available, please provide a web link where more information about these structures can be found. Alternatively, and if available, you may also upload relevant documents about these structures.

Insert the web link

→ *Upload document(s) here*

25. Do the structures in Question 22 have sufficient resources to fulfil their mandate?

	Yes, they have sufficient resources	No, although they have some resources, these are insufficient	No, they have no resources
A permanent committee or sub-committee			
An ad hoc (non-permanent) working group, task force or action group			

GENDER EQUALITY BUDGET

26. Does your union have the following budgets?

	Yes	No
A specific budget for gender equality		
A budget for diversity issues that include gender		

If no to BOTH, skip to Question 28

27. If your union has a specific budget for gender equality or diversity, what percentage of your union's total budget did it represent in the most recent financial year?

Write percentage

DEALING WITH GENDER-RELATED COMPLAINTS

28. Does your union have its own formal grievance mechanism for dealing specifically with gender-related complaints?

Yes	
No	

Skip to Question 30

29. If yes to Question 28, who at your union is responsible for dealing with complaints about gender-related issues? (Select ALL that apply.)

Executive committee or board of officers	
A standing committee (e.g. an ethics committee)	
An ad-hoc committee	
A specific officer	
An ombudsperson	
Other (Specify: .....)	

30. Is/are there any national legal framework(s) your union may use to deal with gender-related complaints?

Yes, and we use it when necessary	
Yes, but we do not use it or have not had a need to use it	
No, there is none	

MOST RECENT SCIENTIFIC CONGRESS

31. In what year was the most recent scientific congress organized by your union?

Write year

32. Does your union have a record of the percentage of women attendees at the most recent scientific congress that it organized?

Yes	
No	

Skip to Question 34

33. If yes to Question 32, what was the percentage of women attendees at that most recent scientific congress?

Write percentage

34. Does your union have a record of the percentage of women among the invited speakers (e.g. plenary and keynote) at that most recent scientific congress?

Yes	
No	

Skip to Question 36

35. If yes to Question 34, what was the percentage of women among the invited speakers at that most recent scientific congress?

	Write percentage

36. Does your union have a record of the percentage of women on the organising committees of that most recent scientific congress?

Yes		
No		*Skip to Question 38*

37. If yes to Question 36, what was the percentage of women on the organising committees of that most recent scientific congress?

	Write percentage

AWARDS AND PRIZES

"Awards" and "prizes" here refer to tokens of recognition for scientific achievements, not research grants or funding.

38. Has your union given out any awards or prizes in the period 2020 to 2024?

Yes		
No		*Skip to Question 41*

39. If yes to Question 38, how many individuals have been nominated for your union's awards or prizes in the period 2020 to 2024 in total, and how many of the total number of individual nominees over that period are women?

	Number
Total number of individual nominees	
Number of nominees who are women	

40. How many individuals have been recipients of your union's awards or prizes in the period 2020 to 2024 in total, and how many of the total individual recipients over that period are women?

	Number
Total number of individual recipients	
Number of recipients who are women	

41. Does your union have awards or prizes specifically recognising contributions by women scientists?

Yes	
No	

Skip to Question 43

42. If yes to Question 41, how many awards or prizes specifically for women has your union given out in the period 2020 to 2024 in total? As a single award or prize may have more than one individual recipient, please also confirm how many individual women have received these awards and prizes specifically for women?

	Number
Total number of awards or prizes specifically for women that were given out	
Number of women who received the awards and prizes specifically for women	

JOURNAL PUBLISHING

43. Does your union publish scientific or scholarly journals?

Yes	
No	

Skip to Question 45

44. If yes to Question 43, does your union keep records of the following?

	Yes	No	Don't know
Percentage of women among editors-in-chief			
Percentage of women among associate editors			
Percentage of women on the journal's advisory board			
Percentage of women among published authors			
Percentage of women among peer reviewers			

OTHER INITIATIVES

45. Does your union currently have formal initiatives in place that focus on any of the following? (Select ALL that apply.)

Mentorship of women scientists	
Leadership training programmes for women	
Encouragement of girls and young women to pursue STEM fields	
Raising awareness of the need for gender equality	
Funding for women scientists	
Research on gender equality and/or women in science	
Advocacy to influence gender-related policies in science	
Collaborations with external organisations focusing on gender equality in science	
Accommodating women with young children when they attend scientific conferences or congresses	
Celebrations of international events such as the International Day of Women and Girls in Science	
Initiatives addressing intersectionality (e.g., gender and ethnicity, disability, LGBTQ+)	
Other initiatives focused on gender equality (Specify: .....)	

46. If you have more to say about any of the initiatives in Question 45, please provide additional information and the web link for each initiative in the space below.

47. Does your union have webpages dedicated to gender equality or women in science?

Yes		
No		*Skip to Question 49*

48. If yes to Question 47, please provide the web links:

EVALUATION AND MONITORING

49. Does your union measure the effectiveness of its gender equality initiatives in any way?

Yes		
Not yet, but plans are in place to do so within the next year		*Skip to Question 51*
No		*Skip to Question 51*

50. If yes to Question 49, please briefly explain how you measure the effectiveness of your gender equality initiatives.

51. In the period 2020 to 2024, has your union received any awards or recognition for any of its initiatives to promote gender equality?

Yes		
No		*Skip to Question 53*

52. If yes to Question 51, please provide details.

CHALLENGES

53. To what extent does your union face the following institutional challenges to gender equality?

	Large extent	Some extent	Little extent	Not at all
Lack of gender-disaggregated data relevant to your union (e.g., absence of data on membership, awards, leadership, or participation, which makes it difficult to identify and track issues)				
Lack of institutional prioritisation of gender-equality issues in your union (e.g., reluctance within your union to acknowledge and address gender-equality issues)				
Limited institutional support from your union (e.g., insufficient funding, staff, or commitment to gender-equality initiatives)				
Underrepresentation of women in leadership and/or decision-making roles in your union (e.g., few women in senior roles, governance structures, or key decision-making bodies)				
Other institutional challenges in your union (Specify: .....)				

FINAL

54. Is there any other information that your union would like to share, including comments on questions in this survey that you have struggled to understand and/or answer? If so, please provide this information in the space below.

55. We may follow up this survey with additional questions and/or interviews. Please check the appropriate box below to indicate if we may contact you again.

Contact us again if needed	
Do not contact us again	

THE END
THANK YOU FOR YOUR TIME AND EFFORT

Annex 8: Individual survey template

REFLECTIVE SURVEY: YOUR EXPERIENCE IN A SCIENTIFIC ORGANIZATION

This survey by the International Science Council (ISC), the InterAcademy Partnership (IAP), and the Standing Committee for Gender Equality in Science (SCGES) explores how scientists participate in scientific organizations over the course of their careers - including experiences of access, benefits and opportunities, career evolution, and organizational culture. Your perspective will contribute to a broader understanding of how scientific organizations function and evolve globally.

Note: In this survey, "scientific organization" refers to organizations that bring scientists together to advance science, support the scientific community, or contribute to science policy. These may operate at national or international level and include organizations with either individual or institutional membership. Such organizations include national academies of science, medicine, or engineering; international scientific unions; disciplinary societies; professional associations; young academies; and international science networks (e.g. the Global Young Academy). It does not include your employer (e.g. university or research institute).

Important: Many scientists are engaged in more than one scientific organization. For the purpose of this survey, please answer with reference to one specific organization — the one you are currently most involved with, or the one you identify with most strongly. If you feel it is important to reflect experiences from another organization, please indicate this clearly in the open text fields.

For any comment or feedback about the survey, please contact Léa Nacache, at lea.nacache(at)council.science.

Section 1: Personal characteristics

What is your gender?
Woman
Man
Prefer to self-describe (open text)
Prefer not to say

What is your age group?
Under 18
18-24
25–34
35–44
45–54
55–64
65+

What is your nationality? *If you hold dual or multiple citizenships, please list them all.*

Where do you currently live?

Please indicate whether you identify with any of the following groups or experiences (select all that apply).
Belong to an ethnic, racial, or national minority group
Belong to an Indigenous group
Identify as LGBTIQ+
Person with a disability
Refugee or displaced person
From a conflict-affected area
From a climate-affected area
Other (please specify)
None of the above Prefer not to say

Have you ever had a spouse or long-term partner? (Please select one that best applies to you.)
Yes – I currently have a spouse or long-term partner
Yes – I have had a partner in the past, but not currently
No
Prefer not to say

If yes, what is (or was) your partner's or spouse's main occupation? (If you have had more than one long-term partner, please respond in relation to the one most relevant to your career experience.)
Employed in science or academia
Employed outside science or academia
Self-employed
Not currently employed
Retired
Prefer not to say
Other (please specify)

Do you consider your partner's career to have influenced your own career decisions or opportunities? (If you have had more than one long-term partner, please respond in relation to the one most relevant to your career experience.)
Yes
No
Not sure
Prefer not to say

If yes, please briefly explain how. If no, please briefly explain why.
Do you have children?
Yes
No
Prefer not to say

If yes, how many children do you have?

Please indicate how many children you have in each of the following age ranges:
0-5
6-12
13-18
19+

Section 2: Professional background

What is your primary occupation? (e.g. biologist, sociologist, ...)

What is your current function or job title? (e.g. Associate Professor, Senior Researcher, ...)

What are your three most important roles in your current position? (e.g. PhD supervisor, grant coordinator, peer reviewer)

What type of institution or organization do you work in?
University
Public research institute
Private company
Non-profit/NGO
Other (open text)

What is your primary discipline?

1. Natural Sciences

1.1 Mathematics
1.2 Computer and information sciences
1.3 Physical sciences
1.4 Chemical sciences
1.5 Earth and related environmental sciences
1.6 Biological sciences
1.7 Other natural sciences

2. Engineering and Technology

2.1 Civil engineering
2.2 Electrical engineering, electronic engineering, information engineering
2.3 Mechanical engineering
2.4 Chemical engineering
2.5 Materials engineering
2.6 Medical engineering
2.7 Environmental engineering
2.8 Environmental biotechnology
2.9 Industrial biotechnology
2.10 Nano-technology
2.11 Other engineering and technologies

3. Medical and Health Sciences

3.1 Basic medicine
3.2 Clinical medicine
3.3 Health sciences
3.4 Medical biotechnology
3.5 Other medical sciences

4. Agricultural and Veterinary Sciences

4.1 Agriculture, forestry, and fisheries
4.2 Animal and dairy science
4.3 Veterinary science
4.4 Agricultural biotechnology
4.5 Other agricultural sciences

5. Social Sciences

5.1 Psychology
5.2 Economics and business
5.3 Education
5.4 Sociology
5.5 Law
5.6 Political science
5.7 Social and economic geography
5.8 Media and communications
5.9 Other social sciences

6. Humanities and the Arts

6.1 History and archaeology

6.2 Languages and literature

6.3 Philosophy, ethics, and religion

6.4 Arts (arts, history of arts, performing arts, music)

6.5 Other humanities

What is your main field or area of expertise?

What is your current career stage?

Doctoral researcher or PhD candidate

Early-career (within 5 years post-PhD or equivalent)

Mid-career (5–15 years post-PhD or equivalent)

Senior (more than 15 years post-PhD or equivalent)

Emeritus/retired

What is the type of your current contract?

Permanent

Temporary or fixed-term

Freelance or consultant

Not currently employed

Retired

Other (please specify)

What is your current working time arrangement?

Full-time

Part-time (by choice)

Part-time (not by choice)

Other (please specify)

Where did your professional career in science begin?

Academia

Public research

Private sector

Industry

Non-profit/NGO

Other (open text)

Did any mentor(s) influence your decision to pursue this path? (Mentors are individuals who provided you with direct support or guidance.)

Yes

No

If yes, what was the gender of the most influential mentor?
Woman
Man
Other (please specifiy)
Prefer not to say

Please briefly explain how this support was instrumental in your choice of a science career.

Did any role model(s) influence your career path? (Role models are individuals you looked up to or were inspired by, even without direct interaction.)
Yes
No

If yes, who was/were this/these role model(s), and in what way did they inspire you?

Have you studied in more than one country or region?
Yes
No

What level(s) of education did you complete abroad? (Select all that apply)
Bachelor's or equivalent
Master's or equivalent
Doctorate (PhD or equivalent)
Postdoctoral research
Other (open text)

Have you worked in more than one country or region during your career?
Yes
No

If yes, in how many countries have you worked (for at least 6 months)?

Please briefly describe how these international experiences have shaped your scientific career or professional outlook.

Have you received any professional awards or recognitions?
Yes
No

If yes, please indicate the main awards and recognitions received.

How many times did you apply or get nominated before receiving your first award or recognition?

Please briefly describe your experience with the process. Have you taken time off in your career?
Yes
No
Prefer not to say

If yes, what was the total duration of your career break(s)?
Less than 6 months
6 months to 1 year
1–2 years
More than 2 years
More than 4 years
Prefer not to say

What were the main reasons for taking time off?
Parental or caregiving responsibilities
Health-related reasons
Lack of funding or contract not renewed
Personal development or sabbatical
Prefer not to say
Other (please specify)

If you wish, please briefly explain your reasons or circumstances.

Section 3: Involvement in scientific organizations

Are you or have you ever been actively involved in a scientific organization?
Yes
No

Please list the main scientific organization(s) you are affiliated with or participate(d) in (e.g., academies, unions, societies).

For the purpose of this survey, please indicate the one organization you will refer to in your answers (the one you are most involved with or identify with the most):

What type of scientific organization is it?
National academy of sciences
National academy of medicine
National academy of engineering
Regional or global academy (e.g., African Academy of Sciences, TWAS)
International scientific union or disciplinary federation
National professional society or disciplinary association
Multidisciplinary science council or platform
Young academy
Informal scientific network or initiative
Other (please specify)
Not sure

Is the organization primarily:
Discipline-based (e.g., a union or professional society in your field)
Non-discipline-based (e.g., national academy, multidisciplinary council)
Not sure
Other (please specify)

If the organization is non-discipline-based, please specify the field or expertise under which you were nominated or affiliated.

At what career stage did you first become involved?
Student (Bachelor's, Master's or equivalent)
Doctoral researcher or PhD candidate
Early-career (within 5 years post-PhD or equivalent)
Mid-career (5–15 years post-PhD or equivalent)
Senior (more than 15 years post-PhD or equivalent)
Other (please specify)

How did you become involved?
I applied on my own initiative
I was nominated
I was invited
I was elected
Other (open text)

Were you encouraged or supported by anyone to pursue involvement?
Yes
No
Not sure

If yes, who encouraged or supported you? Select all that apply.
A senior colleague
A mentor
A peer or friend
A supervisor
A family member
Other (please specify)

If you were encouraged or supported, what was the gender of the person who played the most significant role?
Woman
Man
Other (please specify)
Prefer not to say

How important was this encouragement in your decision to get involved?
Not important
Slightly important
Moderately important
Very important
Essential

Would you like to share anything further about the factors that influenced your involvement in scientific organizations?

What roles have you held?
Ordinary member (not actively involved)
Working group or task force member
Committee member
Board member
Advisor or expert contributor
Leadership role (e.g. President, Vice-Chair)
Other (please specify)

If you've sought leadership or governance roles within a scientific organization, how would you describe the process?

How much time do you currently (or did you previously) dedicate to your involvement in this organization? (Select the option that best reflects your average time commitment).
A few hours per month
Half a day to 1 day per month
2–3 days per month
4–5 days per month (about 1 day per week)
6–10 days per month
More than 10 days per month
It varies significantly over time I'm not sure

Is (or was) your involvement in the organization voluntary or compensated?
Entirely voluntary (unpaid)
Partially compensated (e.g. travel covered)
Fully compensated (e.g. contract, salary, paid role)
Not sure

Would you like to comment on the time you dedicated or the compensation you received for your involvement (if any)?

What motivated you to join the organization?

Did you encounter any barriers when attempting to join this organization?
Yes
No
Not sure
Prefer not to say

If yes, please describe the barriers you encountered.

If you experienced barriers, did they affect your motivation to stay engaged or your level of participation in the organization?

Section 4: Participation benefits and barriers in scientific organizations

What do you value most about your involvement in scientific organizations?

To what extent has being a member of a scientific organization provided you with access to opportunities that would otherwise not have been available to you?

Not at all
To a small extent
To some extent
To a large extent
To a very large extent
Not sure

Please describe the kind of opportunities you are referring to.

Have you ever declined or missed an opportunity offered by the organizations?

Yes
No

If yes, why?

Has the organization provided any support to facilitate your engagement or contributions?

Yes
No
Not sure

If yes, what types of support have you received?

Mentoring or coaching
Leadership or governance training
Scientific communication or public speaking training
Support from affinity or peer groups (e.g., for early-career researchers, women, regional groups)
Access to professional or disciplinary networks
Opportunities for collaboration or team-based activities
Financial support related to your involvement (e.g., travel grants, stipends)
Other (please specify)

To what extent does your scientific organization offer clear and accessible opportunities for growth or progression (e.g., in leadership, recognition, or visibility)? Not at all
To a small extent
To some extent
To a large extent
To a very large extent
Not sure

Please describe any opportunities you've observed or experienced.

Have you encountered any barriers to progressing or being recognized in your scientific organization?
Yes
No
Not sure
Prefer not to say

If yes, please describe the barriers.

Have you had opportunities to attend scientific events, congresses, or conferences as part of your engagement with this organization?
Yes
No
Not applicable

Have you ever declined or missed such opportunities due to constraints?
Yes
No
Prefer not to say

If yes, what were the main reasons? (Select all that apply)
Lack of funding or travel support
Care responsibilities (e.g. children, elders)
Lack of institutional support or encouragement
Visa or travel restriction
Health-related limitations
Lack of inclusion at events
Lack of safety at events
Scheduling conflicts (e.g. events overlapping with major personal commitments)
Other (please specify)

Have you observed or experienced any gender-based differences in access to or visibility at such events?

Yes, in my own experience
Yes, in how others were treated
No
Not sure
Prefer not to say

If yes, could you describe the situation or what you observed?

Does the organization provide any of the following to facilitate inclusive participation in events?

Childcare or family support for conference attendees
Travel funding
Hybrid or virtual participation option
Codes of conduct or inclusion guidelines for events
None of the above
Not sure

Overall, has your involvement in scientific organizations benefited your career?

Not at all
To a small extent
To some extent
To a large extent
To a very large extent
Not sure

Please briefly explain your answer.

Section 5: Inclusion, diversity, and organizational culture

How would you describe the way people work and interact within your scientific organization? (You may wish to comment on aspects such as collaboration, inclusion, hierarchy, decision-making, leadership style, or communication.)

Thinking about the organization's leadership, committees, and events - how well do you feel the following types of diversity are reflected?

Type of diversity	Not at all	Small extent	Some extent	Large extent	Very large extent	Not sure	N/A
Different scientific disciplines							
Different regions or countries							
Different types of institutions (e.g. large universities, smaller institutions, research centers)							
Career stages (e.g. early-career, senior)							
Gender							
Other underrepresented groups (e.g., based on ethnicity, disability, language)							

What helps - or limits - the diversity and inclusion you observe in your organization?

Have you benefited from peer support, collaborative teams, or peer/affinity networks within the organization (e.g., for early-career researchers, women, or regional groups)?

Yes

No

Not sure

Please describe the kind of support or collaboration you received, and how it affected your experience.

Have you observed any patterns in how support or collaboration is shared within teams or networks (e.g., based on gender, seniority, discipline, or other characteristics)?

Yes

No

Not sure

Prefer not to say

If 'Yes', please describe the pattern(s) you've observed.

To what extent do you feel that people engaged in the organization are fairly recognized for their contributions?

Not at all

To a small extent To some extent To a large extent

To a very large extent

Not sure

Please describe how visibility or recognition is given in your organization — and whether you've observed any patterns in who tends to receive it.

Section 6: Policies and practices

For the purpose of this survey, please answer with reference to one specific organization — the one you are currently most involved with, or the one you identify with most strongly. If you feel it is important to reflect experiences from another organization, please indicate this clearly in the open text fields.

Are you aware of inclusion or equity policies in your organization?

Yes

No

Not sure

If yes, please describe or name any policies you are aware of.

If no, please share what you think is missing.

How are new members or leaders typically selected within the organization?

In your view, how transparent are these selection processes?
Not at all
Slightly
Moderately
Very
Extremely
Prefer not to say

Please share any experience that illustrates your view on transparency.

In your opinion, what are the main barriers—if any—to achieving equity within the organization?

Section 7: Experiences of discrimination, harassment and marginalization

Note: The following questions explore experiences that may have negatively affected your sense of inclusion, safety, or visibility in scientific organizations. Your answers will remain anonymous and will only be used to inform a broader understanding of how scientific environments can be made more inclusive and respectful.

Have you personally experienced any of the following within your scientific organization? (Select all that apply)
Verbal harassment
Sexual harassment
Discrimination based on gender
Discrimination based on race, ethnicity, nationality, or religion
Discrimination based on sexual orientation or gender identity
Discrimination based on disability
Micro-aggressions (e.g. repeated subtle slights dismissive remarks)
Being overlooked for roles nominations or leadership opportunities
Having your contributions ignored downplayed or credited to others
Facing higher expectations or scrutiny compared to peer
Being asked to do invisible labour (e.g. note-taking, organizing) without recognition
Being perceived as a "diversity" appointment rather than a qualified expert
Experiencing resistance when advocating for gender or equity issues
Other (please specify)
None of the above

If you selected any of the above, how frequently have these experiences occurred?
Never
Once
A few times
Frequently
Prefer not to say

If experiences varied across types (e.g., frequent micro-aggressions but rare formal discrimination), feel free to specify:

What was the impact of these experiences on your engagement in the organization?
None
Little
Some
High
Very high

If it had an impact, could you describe what happened and how it affected you or your engagement in the organization?

Did you report the incident(s) to anyone within the organization?
Yes
No
Prefer not to say

If yes, was the response adequate?
Yes
No
Not sure
Prefer not to say

If no, why not?

Do you feel the organization has a safe and trusted mechanism to report misconduct?
Strongly disagree
Disagree
Neutral
Agree
Strongly agree
Don't know

Have you witnessed discriminatory, harassing, or exclusionary behaviour directed at others in the organization?
Yes
No
Prefer not to say

If yes, how did you respond?

What changes, safeguards, or cultural shifts would you recommend to help prevent discrimination and exclusion in scientific organizations?

Section 8: Final reflections and feedback

Is there anything else you would like to share about your experience in scientific organizations?

Thank you for completing this survey.

Your responses will help us better understand how scientific organizations function and how participation, recognition, and inclusion can be improved. All responses will be treated confidentially and analysed anonymously. If you have any final thoughts or suggestions about this survey, please feel free to include them below.

Do you have any feedback about this survey?

TOWARDS GENDER EQUALITY IN SCIENTIFIC ORGANIZATIONS

ASSESSMENT AND RECOMMENDATIONS

Scientific academies and international scientific unions play a central role in shaping scientific agendas, defining standards of excellence, and advising policymakers. Through their membership, governance, and recognition systems, these organizations influence whose expertise is visible and who participates in scientific leadership. Persistent gender imbalances within these bodies raise questions about inclusiveness, institutional legitimacy, and the effective use of scientific talent.

Toward gender equality in scientific organizations: assessment and recommendations presents a global assessment of women's representation, participation, and leadership in scientific academies and international scientific unions. Based on institutional data from more than 130 organizations and survey responses from nearly 600 scientists worldwide, the report analyzes gender patterns using data collected in 2025, building on comparable studies conducted in 2015 and 2020.

International Science Council
council.science
secretariat@council.science

InterAcademy Partnership
interacademies.org
iap@twas.org

Standing Committee for Gender Equality in Science
gender-equality-in-science.org
scges.genderequality@gmail.com

International Science Council
The global voice for science

iap SCIENCE HEALTH POLICY
the interacademy partnership

SCGES Standing Committee for Gender Equality in Science