

# SCIENCE DIPLOMACY REVIEW

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# International Co-operation to Enable Capability Building for Women in Physics

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## Introduction

In the world of science, particularly in disciplines like physics, the gender gap is a long-standing challenge; the reasons for this are diverse and deeply rooted, ranging from societal expectations and unconscious biases to a lack of supportive networks and role models. Gender equality is a goal in itself, as recognised by the UN SDG5. To achieve this, there is an evident need to create platforms where women can connect, share their challenges and empower each other. As a step towards fostering inclusivity and diversity in science, The Abdus Salam Centre for Theoretical Physics, ICTP, Trieste, Italy organised a Career Development Workshop for Women in Physics in a hybrid format during 6-10, November 2023. This workshop combined a variety of highly interactive sessions, world café format discussions, talks by inspiring women, panel discussions, poster presentations and skill-enhancing training sessions. Along with the regular capacity-building exercises, it included drama therapy workshops, sessions on negotiation skills and understanding dilemmas that were unique and consciously designed. This workshop brought together 118 women that included more than 90 online participants from 46 countries across the globe (ICTP).

## Ensuring Safe Space

Science diplomacy calls for multi and transdisciplinary as well as intercultural sensitive approaches and adopting gender perspective (S4D4C). This workshop was curated with such a perspective that is necessary for a deeper and broader understanding of various aspects that help or hinder the growth of women world. To achieve this, a safe, bias-free environment where women can share their experiences and

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gain self-confidence through dialogues becomes crucial. Creating such a safe space is the mission of the workshop as conceived by Prof. Shobhana Narasimhan, JNCASR, India. With the first edition held in 2013, this workshop has been organised for the past decade at ICTP by her along with Prof Elizabeth Simmons, University of California, San Diego and Dr Erika Coppola, ICTP. The opening remarks by them set the tone and a creative ice-breaking session through drama therapy helped all the participants travel together in the same plane during the workshop.

## Being Relevant for Global Opportunities

Horizon 2020 project GENDERACTION briefing paper highlights key gender issues for international STI cooperation. For better promotion of gender equality in policy design and implementation of STI at the international level, it recommends anonymisation, different career paths, flexible age limits in mobility schemes, special efforts to reach women researchers for collaboration and recognising publications in different languages. It is important to create awareness and sensitise people in academia, R&D, and innovation hubs to evolve better pathways to support women workforce. These came to fore in different sessions of this workshop which helped the participants build skills to manoeuvre in the international S&T arena. Mini workshops on preparing an effective CV threw light on these. Inputs on the upskilling, updating CVs, elements to be highlighted and those to be avoided were practical to every research scholar, academician or scientist participant of the workshop. They encouraged different formats with relevant details based on the purpose, viz., applying for funding, special grants, academia, post-doc positions, attending seminars/

conferences and based on international/national purposes. Due to the socio-cultural background prevalent in general, many of the participants, especially from the developing countries were surprised to learn about anonymisation of curriculum vitae. Exchanging CVs with participants from other countries for reviewing and rewriting changed our perspective. Every participant got to understand new elements and was sometimes taken by surprise, where a few countries expected the CV to be bilingual, and specify marital status/children present, especially in the case of women researchers and teachers. Importance of having an updated website with a QR code or a video CV was brought up during the discussion, to set the career trajectory in contemporary times.

## Future Policy Actors

World Café format discussion on how your country values scientists/women/women scientists brought various issues to the table, reflecting the epistemic inequalities which are an effect of existing power and knowledge structures, including one relating to gender. Issues on granting maternity/medical leave on time, unhealthy working conditions, and access to information are a few issues women face which are unattended and make the pipe more leaky. A few solutions, laws/ rules followed, women's re-entry fellowships surfaced which were reassuring and emboldened the younger participants to become change makers and communicate to the policymakers as stakeholders. For effective engagement in science policy, negotiation is one of the key soft skills to be developed. The European Commission's Joint Research Centre insists why researchers need to collaborate closely with policymakers in order to address the wicked problems of our age [EU]. Mini workshops on negotiation opened the floor for this, by engaging the participants

in mock negotiations. These role-play simulations allowed them to identify the boundaries and optimal conditions for applying their scientific expertise and explore ways to become future policy actors.

## **Skillset for S&T World**

Training sessions on the art of visual presentation and on giving scientific presentations helped the research scholars and academicians grasp the nuances of creating clear, concise and compelling slides to make a huge impact on their audience. Discussions during publishing without perishing added an altogether different dimension to how we look at research outcomes and our biases. Based on these inputs, participants presented their works and identified the scope for improvement. Researchers face dilemmas often while making decisions on choosing the right methodology, journals, career moves, collaborations, applying for awards, being inclusive and many more. In an interactive session on dilemmas, participants were asked to resolve and discuss situations in the context of a critical dialogue. This creative approach elicited questions on the moral compass, helped everyone to look for alternative paths and raised awareness of maintaining scientific professionalism and integrity.

## **Global Opportunities in STI**

Access to information and gender equality are closely linked goals that are instrumental for the achievement of the SDGs as a whole. In the current digital era, information and platforms for networking for science research, and sharing resources have the power to mitigate inequalities. Talks by eminent scientists on the opportunities at international agencies like ICTP, OWSD and Physics without Frontiers opened up an arena for engaging in their activities, research collaborations

and science outreach. Training sessions on writing successful grant applications, leveraging social media for career connections and panel discussions on how to pick a research topic gave a better perspective to the participants on what is required of them to achieve global partnership.

## **Empowering Women**

Discussions on gender and power structures in academe, gender in the context of the Intergovernmental Panel on Climate Change (IPCC) along with gender equality and inclusivity in scientific research highlighted the areas where we need to progress towards a better world. It calls for international cooperation in STI, multilateral and regional conversations through policies, and academic diplomacy amongst others. Panel discussion on balancing family and career brought diverse issues women face ranging from taking career breaks, relocation, starting a family, travel, taking leadership responsibilities, managing demands as care-givers and probable solutions. Participants and panellists shared their personal stories that illustrate the determination of women to persevere despite obstacles. Drama therapy sessions on challenges in the workplace provided a non-judgemental space to delve into their experiences and explore solutions to grow together as leaders. As the shadow pandemic is threatening women's basic rights and dignity, it is time to focus on the mental health impact on women along with their emotional and physical health.

## **Conclusion**

This workshop for Career Development for Women in Physics which stands as a beacon of hope and unity reinforced the notion that women need not navigate challenging terrains alone. Organising workshops of this nature across the country can

facilitate participatory discussions, receive policy recommendations and ensure their contributions regarding their health and well-being to shape the G20 agenda. By encouraging such unconventional models in STI, it is possible to collectively progress towards championing 'Gender Equality and Empowering All Women and Girls' as incorporated in the G20 New Delhi Leaders' Declaration 2023.

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