

Women empowerment in nuclear diplomacy, nonproliferation and disarmament: Case study of the CTBTO Mentoring Programme

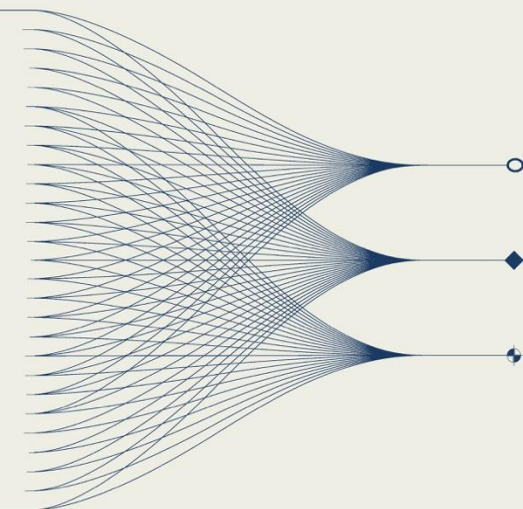
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INTRODUCTION AND MAIN RESULTS

The CTBTO Mentoring Programme connects female STEM professionals with CTBTO experts through one-to-one virtual guidance. Based on a survey of 21 mentees, the programme builds career confidence (75%), expands networks (85%), and inspires further education (55%). It aligns with CTBTO's mission to empower women and advance nuclear disarmament.





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Research overview

This study evaluates the CTBTO Mentoring Programme through a survey of 21 female STEM participants from diverse regions.



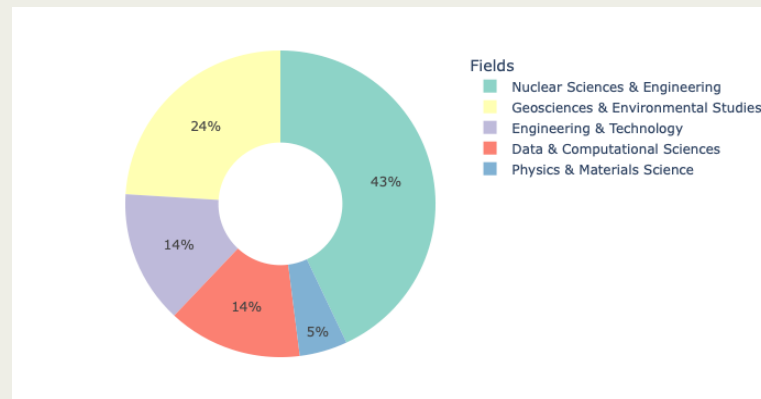
Nearly half of the survey responders (9 of 21) are from Annex 2 States, reflecting the program's alignment with CTBTO's strategic focus on universalization and treaty entry into force.



Map showing the geographical representation of the survey participants

Information about the participants

- With most participants aged **25–30** and with the **less than one year** of experience in the related field, the CTBTO Mentoring Program is cultivating a dynamic new generation of STEM experts who are not only technically skilled but also engaged in shaping policy and advancing global nuclear non-proliferation efforts
- With **57.1%** of participants learning about the program through social media, this underscores the importance for the CTBTO to further develop digital outreach strategies to engage and inspire more youth globally.
- Most of the mentees are **STEM-oriented professionals**, which indicates of the close attention towards technical expertise, however, inclusion of the nuclear policy experts would enrich the diversity of perspectives, strengthening the link between technical expertise and global nuclear governance.



Distribution of the academic background of the survey participants

Program impact in numbers

Career & Professional Development

- **75%** gained confidence in pursuing career development.
- **55%** inspired to pursue further education and training (e.g., MSc programs).

Networking & Opportunities

- **85%** established connections with mentors in the field.
- **40%** collaborated with peers; peer collaboration could be enhanced for future cohorts.

Program Benefits

- Hands-on guidance on research, scientific writing, and career planning.
- Exposure to CTBTO's network expanded professional visibility and technical knowledge.
- Mentorship enabled mentees to present research internationally (World Geothermal Congress 2026, CAG30).

Gender & Diversity

- **65%** discussed or received guidance on overcoming gender-related challenges.
- **40%** felt the program contributes to greater gender parity.
- **55%** believe mentorship programs are essential for advancing women in nuclear fields.



Challenges & Improvements



35% of the participants faced challenges balancing personal commitments with program responsibilities.

Suggested improvements:

- More practical experience (hands-on, internships, real project work).
- Broader exposure to CTBTO experts (both technical and administrative).
- More structured and longer mentorship sessions.
- Facilitate in-person workshops, study visits, or conference participation.
- Enhance peer collaboration opportunities.
- Ensure global accessibility with flexible time slots for participants outside Europe.

Suggested program design and structure



- Combines practical skills, theoretical knowledge, and network building.
- Targets mid-career professionals from diverse educational and geographical backgrounds, with emphasis on the Global South.
- Curriculum includes intensive workshops, mentorship pillars (senior mentor + peer mentor), and group mini-projects for hands-on learning.
- Focus on mentorship for confidence, guidance, and sponsorship to visible career opportunities.
- Addresses gender-related challenges: leadership in male-dominated fields, etc.
- Incorporates learning by doing, practical sessions, internships, fellowships, and study visits.
- Includes policy-focused exercises: e.g., drafting policy memos, case studies, and simulations.
- Promotes rotation of mentors to provide holistic understanding of CTBTO-related activities.

Key skills to be developed:



High-Stakes Negotiation & Dialogue Facilitation



Technical Policy Analysis & Communication



Strategic Networking & Coalition-Building

Conclusion

The research shows that the CTBTO Mentoring Programme effectively empowers STEM professionals, building confidence, skills, and global networks while supporting CTBTO's mission.

Participants benefit from personalized guidance, career opportunities, and exposure to nuclear non-proliferation and disarmament.

Expanding hands-on experiences, peer collaboration, and women-focused initiatives can further strengthen leadership development and gender parity in the field.

