



**A Global Approach to the Gender Gap
in Mathematical, Computing and Natural Sciences:
How to Measure It, How to Reduce It?**

**Towards recommendations,
propositions and open questions**

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What is the Gender Gap in Science Project ?

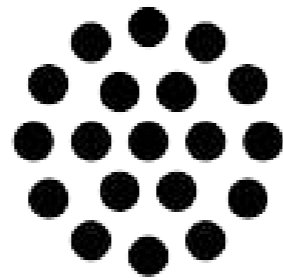
3 Tasks

- Task 1: Joint global survey
- Task 2: Joint data-backed study on publication patterns
- Task 3: Database of good practices for girls and young women, parents, and organizations






Regional meetings in Africa, Asia and Latin-America


Final meeting at ICTP

Funding and Partner Organizations



International Science Council

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|  | International Mathematical Union |
|  | International Union of Pure and Applied Chemistry |
|  | International Union of Pure and Applied Physics |
|  | International Union of History and Philosophy of Science and Technology |
|  | International Astronomical Union |
|  | United Nations Educational, Scientific and Cultural Organization |

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|  | International Union of Biological Sciences |
|  | Gender in Science, Innovation, Technology and Engineering |
|  | International Council for Industrial and Applied Mathematics |
|  | Organization for Women in Science for the Developing World |
|  | Association for Computing Machinery |

Recommendations to reduce the gender gap

Preliminary recommendations in the Report

for instructors and parents

for local institutions

for national (and beyond) organizations

Discussed in an interactive way during the **World Cafe**

All participants were very active and contributed.

Many thanks to them !

World Cafe



Recommendations to reduce the gender gap

Need to distinguish clearly between
recommendations and **open questions**
coming from the tasks of the project

and

various **propositions** discussed during the
meeting, in particular at the World Cafe

Main messages in a nutshell

**The gender gap is very real in
mathematics and science.**

Main messages in a nutshell (from Task 1)

**Men and women do not have the same
experiences.**

**Women's experiences are consistently less
positive**

**Independant of discipline, geographical zone
and developement level (HDI)**

Main messages in a nutshell (from Task 2)

**There has been significant increase in the
proportion of women scientists**

**However, particularly in mathematics and
theoretical physics, this increase is not
reflected in the proportion of women
publications in top ranked journals**

Main messages in a nutshell (from Task 3)

There is a variety of initiatives to reduce the gender gap all over the world

It is needed to analyze them in a conceptual framework (SAGA's UNESCO project framework was extended)

Example of recommandations

For unions and organization :

encourage awareness campaigns and share best practices to reduce and address sexual harassment

According to the Global Survey of Scientists, to “I have encountered sexual harassment at school or work.”

Women respondents were 14.4 times more likely than men respondents to say yes.

Example of open questions

In Mathematics and Theoretical Physics women are seriously underrepresented as authors of renowned journals -compared to their proportion among authors globally

Understand why and give adapted recommendations

Example of recommandations

Evaluation of initiatives is essential in order to build a credible evidence base that can inform future developments.

Indeed, in the Data Base of good practices, only 15 % of the initiatives have been evaluated for effectiveness or impact in terms of outcomes and benefit to participants.

Example of propositions

Coming from participants of the World Cafe

For the parents

Encourage your girls to study scientific topics as much as you encourage your boys

For the organizations

Take into account the local culture while working on Gender Equality and Gender Empowerment

Recommendations and propositions to reduce the gender gap

Final recommendations and propositions to be included in the Report

for instructors and parents

for local institutions

for national (and beyond) organizations

To be worked out by the leadership of the project during the two remaining months.