



International Day of Women and Girls in Science

#February11

First International Panel on

Girls in Science for Sustainable Development: Vision to Action

Conference Room 5, United Nations Headquarters

10.00 – 13.00 , 9 February 2018

Chairs: Miss Rebecca Jekogian and Miss Talya Ozdemir

Respondent: Miss Huaxuan Chen

Mentor: Mr. Andrew Muetze, International Educator - Switzerland

Final Report and Outcome Document

Prepared by

Royal Academy of Science International Trust





“Equality and Parity in Science for Peace and Development”

**8 - 9 February 2018
ECOSOC Chamber
United Nations Headquarters
New York City**



“The real solutions for world’s problems like global warming will be invented by girls like me. Girls have a lot to share that adults do not think about, so when we talk, listen”

Rebecca Jekogian, 1st International Day of Women and Girls in Science, UNHQ 2016



“Take the vision and wisdom from scientists; given the fact that I will be a future woman in science, thus take the vision and the wisdom from me”

Talya Ozdemir, 2nd International Day of Women & Girls in Science, UNHQ 2017



“The immediate and direct impact of Talya and Rebecca and many girls like them, on their communities and societies, is much greater than the impact of celebrities! This is the power of a Girl Child. I hope that all international conferences and forums, including the International Day of a Girl Child Conference, will have Children in General and Girls in Particular as the speakers, and we adults will be the attendees and participants, to learn from their vision on how to do work, how to live in peace and how to believe in Equality....

In order to empower girls for the future, we need to recognize and celebrate the achievements of women in science, known and unknown, remembered and forgotten, who have forged the way for those of us in science today, as well as the Women in Science of today who are making history in the present for the future. Only through this we can give the opportunity for children: girls and boys, to choose their women in science role models.

Today, more than ever, we are creating the change to work on promoting the excellence in education and science for girls”.

Princess Dr. Nisreen El-Hashemite, International Day of a Child Girl, 11 October 2017, Istanbul



Concept Note

Background

The idea for an International Day of Women and Girls in Science was generated during the first High-Level World Women's Health and Development Forum organized by the ***Royal Academy of Science International Trust (RASIT)*** and The United Nations Department of Economic and Social Affairs, and held on 10 and 11 February 2015 at the United Nations Headquarters.

Following outreach to a number of partners and stakeholders at all levels and with RASIT's partnership with the Government of the Republic of Malta, a milestone year was reached in which the 70th Session of the United Nations General Assembly adopted resolution (70/212) proclaiming February 11th annually the International Day of Women and Girls in Science. The sponsorship of more than 68 countries and the approval of all Member States to the resolution signals the global community's interest in transforming our world through achieving equality and parity in science for sustainable development.

The partnership between the Royal Academy of Science International Trust (RASIT) and the Government of the Republic of Malta illustrates Sustainable Development Goal 17, which is Strengthen the means of implementation and revitalize the global partnership for sustainable development

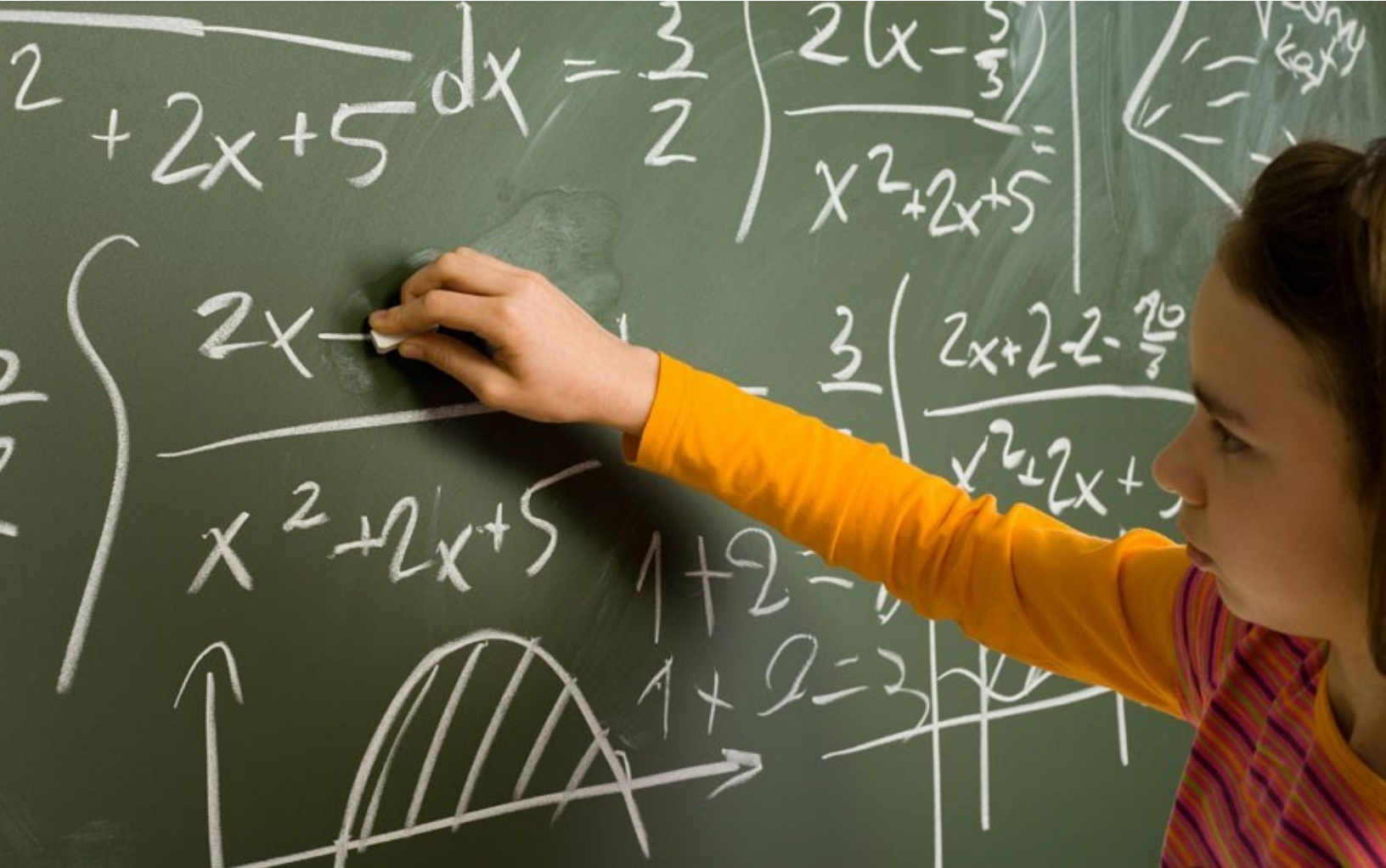
In both 2016 and 2017, the Royal Academy of Science International Trust organized the commemoration of the International Day in close collaboration and partnership with the United Nations Department of Economic and Social Affairs (UN-DESA) and the Government of Malta, respectively. The participation of the highest levels of the UN system agencies and programmes, Inter-governmental Organizations and Member States, demonstrates the continuing resolve and commitment of international community to eliminate gender inequality in science, employment, opportunities and education.

The Second Commemoration of this International Day revolved around the theme “Gender, Science, and Sustainable Development: The Impact of Media”. The theme of the sixty-second Session of the UN Commission on the Status of Women (CSW62) looks forward in this regard, since the priority theme will be: "Challenges and opportunities in achieving gender equality and the empowerment of rural women and girls", with the review theme of CSW62 being entitled: "Participation in and access of women to the media, and information and communications technologies and their impact on and use as an instrument for the advancement and empowerment of women". Since 10 February 2017, the impact of media in achieving the sustainable development goals is now widely discussed in the international community.

Under the lead of the Royal Academy of Science International Trust (RASIT) and the Government of the Republic of Malta, the 3rd commemoration of the International Day of Women and Girls in Science, was organized in close collaboration with the United Nations Conference on Trade and Development (UNCTAD), the Permanent Missions of Costa Rica, Hungary and Vietnam to the United Nations and with the co-sponsorship of the Permanent Representations of Argentina, Australia, Colombia, Cyprus, Georgia, Paraguay, Portugal, Rwanda, San Marino and Thailand to the United Nations; as well as the International Labour Organization (ILO), the World Intellectual Property Organization (WIPO), International Telecommunication Union (ITU) and the International Union for Conservation of Nature (IUCN).

The 3rd Commemoration Forum was held at the United Nations Headquarters in New York from 8 – 9 February 2018, and focused firmly on “**Equality and Parity in Science for Peace and Development**”





3rd International Day of Women & Girls in Science Forum

Equality and Parity in Science for Peace and Development

Despite some progress in recent years, achieving equality and parity in science remains an important challenge for policy-makers and the scientific community at large. This commemoration will examine the need for policy changes at all levels, to address the gender imbalance that exists in scientific fields, as well as in other areas including technology, engineering, mathematics and cutting-edge innovative technologies.

The role that women in science can play at all levels has become a priority on the science agendas of many national and international political institutions. Although the number of female science graduates has increased, true equality and parity in science has not yet been achieved.

Over the past 25 years, the United Nations and its agencies have realized the gender-gap in science; however, the advancement of women and girls in science has not only stalled, but the international community is seeing a recidivist slide backwards.

The question to be asked is "Why?" Why have there been so few female scientists chosen to speak at high-level events, or selected to take part in international decision-making bodies, or to deal with policy formulation?

In striving towards equality, peace and prosperity and towards universal sustainable development, the role of women in science in achieving implementation of the 2030 Agenda must be recognized.

The Significant role of the UN Conference on Trade and Development (UNCTAD), as the responsible UN entity serving as the Secretariat for the UN Commission on Science and Technology for Development in suggesting policy recommendations to Heads of State and Government, as well as to parliamentarians; was highlighted, and similar to neglected areas of science and the official UN bodies that deal with them was also presented. Further, the role of the scientific diaspora was also discussed.

The 2018 International Day of Women and Girls in Science Forum (IDWGS-2018) aimed to mobilize women in science (life / applied or social sciences) expertise from a wide range of disciplines that can contribute to achieving sustainable development goals. It explored innovative ways to measure and assess data produced by International Organizations. The Forum also provided a unique opportunity for policy-makers and women in science experts to propose International Framework and Action Plan for Equality and Parity in Science.

The purpose of this Forum was to harness the strategies, expertise and resources across the broadest spectrum of policy-makers, professionals, civil society and the private sector to move equality and parity in science for sustainable development into the mainstream discourse, and to identify implementation gaps and co-create action plans. The Forum sparked sustained public demand for lasting political action in support of an ambitious outcome from the 2030 Development Agenda process and other declarations and Outcome Documents of other UN fora.

The Forum Planning Committee made every effort to ensure that perspectives from north/south, gender, youth, older persons, indigenous peoples, persons with disabilities, global geographic areas, expert constituencies, and international networks are included.





Themes:

The Forum will be organized around the following themes:

Priority Theme:

♦ Equality and Parity in Science for Peace and Development

- ⇒ Review of relevant United Nations plans and programmes of action pertaining to the situation of Science, Technology and Innovation
- ⇒ Understanding Equality and Parity in Science through capacity building, cooperation and data governance (gap in statistics, data to address policy concern, stakeholder coordination, data sharing/exchange, etc.)
- ⇒ Women in Science in Peacekeeping

Emerging issue:

- ♦ Promoting Integrated Policies for Equality and Parity in Science for Achieving Implementation of the 2030 Agenda through a “One UN” lens.

Specific topics and applications could include inter alia (i) global, regional or national status of women in science, (ii) evaluation of the economic and social impact of Women in Science in Sustainable Development Programmes and in Voluntary National Reviews (VNRs) of the High-level Political Forum, (iii) measurement of SDG indicators related to equality and parity in science, technology and innovation.



Programme

Day 2: Friday February 9

10.00 - 13.00

Girls in Science for Sustainable Development: Vision to Action

This Session was convened by young change-makers and passionate girls-in-science advocates from around the world to present their vision on how they can utilize science to achieve sustainable development goals. This session strived to empower, educate and embolden the potential of every girl. The aim of this session is give girls the opportunity to gain core leadership skills. training in community-building and advocacy

Chairs: Talya Ozdemir and Rebecca Jekogian

Mentor: Andrew Muetze – International Educator, Switzerland

Remarks:

HRH Princess Dr. Nisreen El-Hashemite, Executive Director - Royal Academy of Science International Trust

H.E. Ambassador Nguyen Phoung Nga, Permanent Representative of Viet Nam to the United Nations

Interventions

María José Solís Rivera: *“What Can We Achieve as Women in the Future in Technology and Robotics?”*

Sthuthi Satish: *“Everyday Bias and Oppression in the Classroom”*

Huaxuan Chen: *“Why Science needs women and girl”*

Annelise Faustine Cornet: *“How I feel about science?”*

Gilda Jarquín Somoza: *“How can a role model the fields of science and technology influence our lives?”*

Ava Patino: *“Where Science Meets Humanities: My Experience of the Two Worlds”*

Mosammat Muna: *“Why Are There So Few Women in Computer Science? How can we get girls more interested in Computer Science?”*

Mariela Muñoz Herrera and Dana Mesén Guerrero: *“Together Achieving Equity and Innovating for the Good of Humanity”*

Karen Li: *“Women in Science Around the World”*

Janice Tjan: *“Equal & Opposite Reactions: How Greater Female Involvement Can Change the World of STEM”*

Michelle Liang, Carmen Munoz-Medrano, and Wardah Sheikh: *“How to improve science education”*

Stephannie Aguilar Mora and Darlyn Vargas Vivas: *“The Discrimination that Women and Girls Live with, Day to Day with Respect to Labor Issues”*

Annie Ikemoto: *“A Girl's Adventure in Science”*

Talar Terzian *“Borderless Opportunities for a Girl in STEM”*

Vanessa Leal: *Equality for Women in STEM Careers”*

Audrey Lee: *“Mentorship, Technology & Innovation: My Experience”*

Or Kulishevski: *“Creating a Movement to Engage More Girls in STEM”*

Debate Initiated by Dr. Kavita Imrit: “Science in our Daily Life”

Summary and Conclusion





**"If you know you are on the right track, if you have this inner knowledge,
then nobody can turn you off... no matter what they say,"**

Barbara McClintock, cytogeneticist and winner of the 1983 Nobel Prize in Physiology or Medicine.

Status Report

We the future women in science had our first Girls in Science Panel during the third the International Day of Women and Girls in Science Forum held at the United Nations Headquarters on February 9, 2018. The Panel was organized by the Royal Academy of Science International Trust (RASIT) in close collaboration and partnership with the Government of Malta.



Under the leadership and mentorship of HRH Princess Dr. Nisreen El-Hashemite, Girls made history at the United Nations: it is the first panel that was chaired, moderated, and attended by girls in science from around the world to discuss the barriers that girls face in becoming scientists and solutions to ameliorating the current circumstances.

This Panel was a big challenge for the RASIT at the International Community. However, RASIT is faithful to its mission “Investing in the Future’s leaders”, as it gave girls and boys from around the world every opportunity to be heard and share their visions as the leaders of today and tomorrow to achieve sustainable development.

The Conference room was filled with passionate and ambitious young women who shared their stories, visions, and recommendations to achieve Equality and Parity in Science.

This panel was chaired by Talya Ozdemir, an 11-year-old girl from Turkey, and Rebecca Jekogian, a 13 year-old girl from USA; Huaxuan Chen, a 16 year-old girl from Canada was a respondent; and Mr. Andrew Muetze, an international educator from Switzerland, served as a mentor and moderator of the debate.

Overview

The chairs opened the Panel by welcoming participants. Then, Rebecca Jekogian started off by talking about her goal of becoming neuroscientist in the future and how many girls around the world her age face challenges and are discouraged to pursue the same dream. She hopes that all girls around the world will be given equal opportunity and encouragement to boys to pursue their dreams and become scientists if they so choose.

After Miss Jekogian’s welcome address, Talya Ozdemir talked about how we can use science and technology to help other girls around the world. She shared the experience of her trip to Africa where she encountered kids who live in uncomfortable homes without electricity and noticed the lack of health clinics and schools. She talked about how electricity can be used to reduce inequalities and help end poverty, which is the reason why many girls don’t get a sufficient education. With electricity, girls can get access to countless resources to further their interests in the sciences. She then spoke on how renewable energy can be used to

provide electricity for those in developing countries, as it's clean and affordable. The power of technology is especially puissant in our generation, and it can be used to promote and achieve peace in all forms.



The Official Remarks were presented by HRH Princess Dr. Nisreen El-Hashemite, RASIT's Executive Director and Founder and President of the Women in Science International League; and H.E. Ambassador Nguyen Phoung Nga, Permanent Representative of Vietnam to the United Nations.

Princess Dr. El-Hashemite talked about how her story and how obstacles in this life do not mean that the world is against you, and obstacles don't and shouldn't limit your will to achieve your ambition and goals. Through her speech,

Princess Dr. El-Hashemite emphasized how proud she is of all girls participants, and that adults are learning from them because Girls' vision, power and impact are great. She talked about Poorna, a young girl from a small village in India, who couldn't pay the required funds to go to school, so she got expelled. Fortunately, her father sent her to social welfare school, and with the help of her headmaster, she became the youngest girl to reach the summit of Mount Everest to show that girls can achieve anything and everything. Thanks to her, the number of girls going to school in India has increased, the number of early marriages of young women has decreased, and the number of parents working hard, despite obstacles such as poverty, to send their children to school has increased. Princess Dr. El-Hashemite said: "This shows that courage has no limits and that one girl has the power to change her society". Princess Dr. El-Hashemite also spoke on how men and boys are our partners, not competitors, and that it takes everyone to achieve sustainable development.

Ambassador Nga talked about how we can only achieve sustainable development if we support and meet the demands of the people of this generation and future generations of girls. She talked about how only about 30% of researchers in the world are women and how women get less publicity, facilities to perform their research, and support than men. Gender stereotypes are still very prevalent today, and an efficient and productive way to achieve gender parity is awareness. Raising awareness can be done in two ways: campaigns and awards.



Campaigns can promote women's role in science, encourage girls' participation, and build self-confidence and esteem in girls so they have the right mindset that science is not only for men. Awards can give the spotlight to successful girls and women in Science, Technology, Engineering, and Mathematics (STEM), and these influential leaders can serve as role models for younger girls to pursue their dreams. Women and girls are not the only stakeholders here; we must engage with multi-stakeholders, including fathers, brothers, boys, men, and our families to achieve gender equality. Families play a salient role in helping children develop and follow their dreams, as they lift us up and provide us with the support and financial resources to achieve our goals. It is notable that Greg Helmstetter and Pamela Metivier wrote the STEAM TEAM 5 book, which is composed of numerous engaging and interesting stories that help girls become interested in the sciences at a young age. Ambassador Nga also spoke on how gender inequality is in the works at the UN, as only 25% of the Ambassadors are women. All in all, this demonstrates how gender equality is a truly global issue that must be addressed to ensure women have their voices heard in decision-making, and that they are given the opportunity to lead.

The Chairs then introduced the Girls who submitted request to present speeches.

María José Solís Rivera, a 17 year-old girl from Costa Rica, spoke on “What Can We Achieve as Women in the Future in Technology and Robotics?” She has always wanted to build a robot that would go into space, and she is still working very hard to achieve that dream. She spoke on how the false perception and stereotype that science, math, and technology is just for men has to change. Robotics has numerous applications to our daily lives, such as aerospace engineering, construction, and in medicine to help those in need. It is a broad and interdisciplinary field that we must venture into, inclusively. Her powerful remarks that *“we must lose our fear, as fear is a feeling, not an impediment, shows that we are more than what we think we are, and to conquer those fears, all we have to do is dream and fight for equality”*.

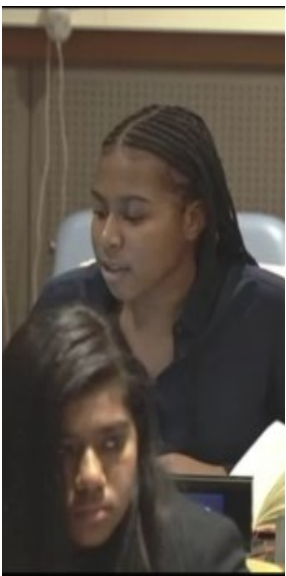


Sthuthi Satish, a 14 year-old girl from India spoke on “Everyday Bias and Oppression in the Classroom.” She shared a personal story where her schoolteacher said, “Even boys can get better marks than you,” and suggested that science is a man's asset. She talked about how schools are indeed disabling and discouraging girls from becoming their best selves and that equality is a collective struggle of everyone in the classroom. She also shared her story that in August, 2016, her chemistry teacher sexually assaulted her because she proved him wrong. However, the teacher still works at the school, because in that community, his gender overpowers the evidence. The volume of her voice didn't scare people, but the fact that she had a voice made others realize an issue to which they had previously turned a blind eye. Satish talked about how everyone should be free to choose their own identity, and that being a woman is not an excuse but a reason to work harder to achieve ‘impossible’ dreams.

Huaxuan Chen, a 16 year-old girl from Canada, spoke on “Why Science needs women and girls.” She talked about how even after multiple feminist movements, such as the suffrage movement in the USA, gender equality is still a prevalent issue affecting millions of girls and women today. She gave the example of Silicon Valley, where women spoke frankly on the culture of harassment in the workplace, and how those in top-tier positions are unfairly treating their female employees and what message that sends to the world. She talked about the power of women’s leadership in science, and how supporting women in science and bringing the spotlight to female scientists’ contributions today helps younger girls and boys understand (from a young age) that women are needed in science and it’s the status quo that more women and girls are going into the sciences and that they do make science better.



Women in decision making can truly influence the nature and community of the workplace, as they can contribute new and creative ideas, and it is nearly impossible to become the most productive and efficient in this emerging technological and scientific revolution without half the invaluable population. She spoke on how we can use technology to showcase female scientists’ successes to serve as a motivation for more girls to become just like them. Chen also spoke on how those from rural and developing countries don’t have access to electricity and internet, and how they have lack of resources and materials to learn science. She shared her story about her service trip to Ecuador last summer. None of the girls said they would like to go into STEM, except for one little girl who said she enjoyed math. This is very different from what girls in developed countries would answer, and she was so concerned and then inspired that she has started a project with A Better World Canada and a school in Tulwap, Kenya to provide international mentorship to the students who are under copious amounts of stress to do well in school to break their cycle of poverty and support girls to go into the sciences with confidence and aid, without borders.



Annelise Faustine Cornet, a sophomore from the USA, presented: “How I feel about science.” She talked about her experience at her school, The Pennington School, in New Jersey. She talked about her school’s student-centered learning, where students lead classes during the day and learn from each other while solving practice problems. This has helped her acquire a deeper understanding of the material and become more engaged with the homework presented to her. This helps students become more independent in their learning and also encourages students, boys and girls, to work together to solve challenging problems. Her school also provides differentiated teaching to account for students’ different learning styles. She has talked about how her teachers have supported her when she was having difficulties with school and has proposed that teachers should create and maintain a comfortable and welcoming environment where everyone can share their knowledge with their classmates and not be hindered by social pressures. Cornet talked about how ***we should leave no girl behind and that we should make STEM programs available to everyone, including girls worldwide and from all economic and socio-economic statuses, as it’s very powerful what girls can achieve when they have the opportunity to unleash their hidden talents.***



Gilda Jarquín Somoza, a 16 year-old girl from Costa Rica, presented: “How can role models in the field of science and technology influence our lives?” She talked about how we are born curious and we become interested in science at a young age. The environment where we grow up greatly influences our interests in sciences, and we learn from our experiences (good and bad) which is how we form our interests and wishes for future paths. She talked about how she’s worried and concerned that there are fewer women dedicated in STEM field and that they’re underrepresented in social media and not getting enough recognition for their work. This could lead women to abandon their university projects and discourage them from pursuing their field of choice. ***When women become role models for other young girls, those girls can learn from them; when passion is combined with persistence, anything is possible.***

Ava Patino, a 15 year-old girl from the USA, discussed: “Where Science Meets Humanities: my Experience of the Two Worlds.” She shared her experience as a theatre student and her ever-growing interest in astronomy. She talked about how her school doesn’t have science fairs nor coding classes, and the isolation she felt at school as a theatre student interested in the sciences. Her worlds collided when she attended a science and engineering program, where she had to create a video game using code, and she wrote the script for the choose-your-own-adventure game. She believes that ***the difference between science and the humanities can be polarizing but they are stronger together. In fact artists and scientists are alike, as they all work hard in creative and innovative ways to solve a problem about the world around us.***



Mariela Muñoz Herrera and Dana Mesén Guerrero from Costa Rica talked about, “Together Achieving Equality and Innovation for the Good of Humanity.” They talked about how it takes men and women to make rapid advances in technology and science, and that women and girls must support each other and work together, as partners not competitors, to achieve their goals.

Janice Tjan and Karen Li, 17 year old aspiring engineers from New York City, presented: “Equal & Opposite Reactions: How Greater Female Involvement Can Change the World of STEM.” They talked about how our society is advancing at light speed, where product generation to meet our demands is improving at very fast rates. To keep up with these rates, we need more female innovators. Tjan noted that when science lacks parity, consumers of these products face the consequences. Iterations are calibrated to deeper voices, and many of our products are male-serving. Some of these products can even determine life and death. She gave the example of automotive air bags which were previously designed solely for men. She talked about how many technologies that are designed by men are for men and that women are often unostentatiously disadvantaged. Li gave three examples of female scientists: Dr. Rita Levi-Montalcini, an



Italian neurologist who received a Nobel Prize for her work in the nerve growth factor that applies to dementia and cancer, Dr. Chien-Shiung Wu, a particle physicist from Hong Kong nicknamed “the First Lady of Physics” who helped develop the process for separating uranium metal into uranium-235 and uranium-238 isotopes by gaseous diffusion, and Dr. Jane Cooke Wright who was one of the first African American doctors to study chemotherapy and was a trailblazer in the field at Harvard University. Li talked about how our world is very interconnected, and *we have a responsibility to make sure everyone has a chance to enter STEM fields and to voice their ideas*. She suggested that *we must find reasons why girls are discouraged to go into the sciences and why they aren’t as successful as their male counterparts worldwide so we can implement feasible and applicable solutions for each country*.



Michelle Liang, Carmen Munoz-Medrano, and Wardah Sheikh spoke on “How to improve science education”. Sheikh talked about how modern perception on science is about textbooks and problems for homework, and that we are not asking how or why because we rely on the internet for answers. She said that we should encourage students to understand how the world works in two ways: 1) motivation for students and 2) technology. *We should motivate students to become engaged in the sciences by having school trips and outside activities for students, as they learn best visually and kinaesthetically. Having engaging and motivational speakers can also be very effective and spark students’ curiosity for current issues*.

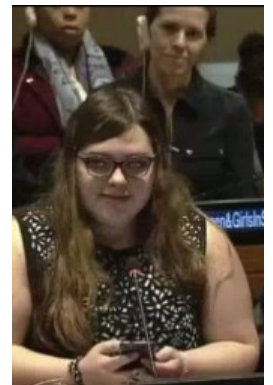
Technology, being a prevalent part of our lives, should be employed in our classrooms. Teachers could create or incorporate existing apps into lessons to help students become more hands-on with the material in a way that aids with information retention. Munoz-Medrano furthered her argument by giving examples where government projects have been successful. She spoke of the “No Child Left Behind Act” of 2002 which improves individual outcomes in education, especially helping students who have been disadvantaged in the past and the “Every Student Succeeds Act” which reinforced the “No Child Left Behind Act”. She talked about how all schools should have equal resources and support, and that most of the action begins at schools, such as giving girls the chance to become more engaged in their science classes in order to encourage innovative ideas from girls and to eradicate the social norms. She talked about her experience with the Goals for Girls program, a six-week summer program which helped her gain more confidence to become a computer scientist or engineer in the future. Liang talked about *the lack of scientific projects that include girls and boys, and that we should encourage teamwork at a young age with girls and boys from diverse backgrounds and talents working together to achieve a common goal*. She gave the example of the International Rice Institute which works to battle poverty and hunger to support her point that this is indeed feasible.

Stephannie Aguilar Mora and Darlyn Vargas Vivas from Costa Rica talked about “The Discrimination that Women and Girls Live with, Day to Day with Respect to Labor Issues.” They talked about how STEM careers are seen as male-dominated careers. We must eradicate the belief that women are weak and aren’t smart. *“We are very intelligent and capable, and we shouldn’t be forced to think otherwise”*. They noted that their teachers don’t believe they’re able to understand difficult concepts to the same degree that boys can, even though they are quite capable.



Annie Ikemoto, a 17 year old girl from New Jersey, USA, talked about “A Girl’s Adventure in Science.” She emphasized the idea that science is built upon curiosity and creativity and that science isn’t just about numbers or formulae but rather interpretations of the numbers and real world applications. She noted that *science is a form of communication and interaction of ideas between like-minded people; it is not about gender, culture, or race, as knowledge shouldn’t have barriers*. With a digitalized world that is continually growing, it is necessary to have diverse minds to interpret data and make revolutionary innovations to fuel the fire. Ikemoto also talked about the lack of clinical studies on females. With more testing we can better understand women’s challenges and diseases, and design drugs that meet the biological and physiological needs of women. She stated that *science should be actively built upon by the paradigms of society today*.

Talar Terzian, a 16 year old girl from Florida, talked about the “Borderless Opportunities for a Girl in STEM.” She believes that being a scientist means being a citizen of the world. Through her extracurricular involvements, she has made connections with aspiring scientists from across the globe, studying food loss, phosphate, and electricity shortages, to note a few. She noted that more opportunities for girls and boys can bridge socio-economic divides and that we can join worlds and passionate scientists with chances for everyone to further their interests in science in a supportive and welcoming environment and team.

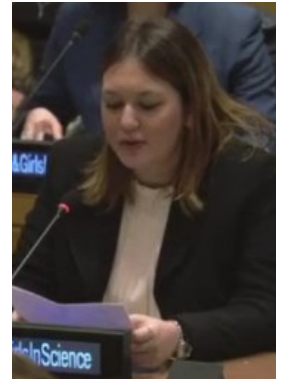


Vanessa Leal, who hopes to become a mechanical engineer in the future, **and Mosammat Mun** talked about “Equality for Women in STEM Careers: How can we get girls more interested in Computer Science?” They talked about how women are viewed as delicate and weak being, and that we must put in triple the amount of work to get recognition but still earn one-third less than men. Although women do have more rights in the 21st century than the 20th century, such as the right to vote, to get an education, and to wear pants, there are still many inequalities that continue to exist. *We must establish a balance to ensure women and men have equal rights, opportunities, and benefits, and that we should be appreciated by who we are and not what we are.*



Audrey Lee, a sophomore at Columbia University studying biomedical engineering, talked about “Mentorship, Technology & Innovation: my Experience.” She was faced by the vagueness of how to become an engineer at first but was motivated to become an engineer after working with inspirational mentors who helped her clarify her goals and further her interests in engineering. She emphasized *the importance of programs and immersive learning opportunities that engage students and connect them with mentors who act as role models and help them reach their goals by providing invaluable advice and opportunities.*

Or Kulishevski, a 17 year old aspiring computer engineer from Israel, talked about “Creating a movement to Engage more girls in STEM.” She talked about *the role of governments in encouraging girls to go into higher level learning and that without this encouragement, it can lead to a loss for girls and humanity.* She highlighted the importance of giving every girl sufficient education and encouragement they need from their teachers and colleagues.



Debate:



The Panel’s discussion was opened by a presentation from Dr. Kavita Imrit, a female scientist in microbiology and infectious diseases, who spoke on “Science in our Daily life.” She talked about the importance of science education at a young age by sharing the example of how science has an impact on our daily life. She delved into the world of diseases with five year old children to get them interested in the sciences and its applications to their daily lives. She also talked about the importance of surrounding yourself with mentors and peers who believe in you. Her main argument was that it’s important to make sure women not only get into STEM careers but they have an enduring and enjoyable STEM career. This includes preventing burnouts by considering the costs of being a mother, wife and doctor combined with other stresses and responsibilities put upon them as women. Another important issue is financial security, as women often face hardships when becoming pregnant and securing their employment after they become a mother.



Mr. Andrew Muetze then moderated the debate. The girls in science discussed opportunities, girls from rural areas, the role that technology plays in breaking barriers between students from different areas around the world and increasing access to resources, the power of female representation in leadership and decision-making positions, mentorship, inclusive environments to foster growth and development in STEM sectors, eradication of social norms that sciences are men-centered, encouragement and quality education for every student, multi-stakeholders who can help achieve gender parity, this issue’s connections with Sustainable Development Goals, and the glass ceiling.

Topical Summaries

Question 1: In a society where technology is becoming increasingly prevalent in our daily lives, how can we use technology to narrow the gap between the girls and women from the north and the south, and west and the east (everyone around the world)?

The participants discussed the importance of incorporating technology into the curriculum and school lessons, especially during students' early ages. They discussed the role

of technology that connects people around the world, so girls can find a larger supporting community of aspiring female scientists, which could help them build their confidence and networking. Technology isn't limited to material objects, as intangible technologies such as coding can improve the lives of women in developing countries.



Question 2: How can we ensure women's voices are heard at all levels of decision-making and why is female leadership important?

The participants spoke on how female leadership can empower younger girls to pursue STEM careers, as female scientists can serve as role models to show them that their dreams aren't so distant and unreachable. The participants spoke on utilizing our allies, as we cannot become leaders without everyone else stepping up for us. Group projects could be a launch point for boys and girls to work together and to recognize each other's leadership skills and strengths. One way that we can expand on this message is to have more posts and videos from influential figures on media, so this message can be delivered to everyone, from both developing countries and developed countries, as inequalities exist everywhere.

Question 3: How can we support girls and women from rural areas and developing countries, and refugees?

The participants spoke on how this is not only an issue of equality but also an issue of equity so that everyone has equal access to tools for success and the equal chance to achieve success. By sharing and collaborating on scientific methods with everyone around the world, we will be able to work together with people in difficult circumstances to solve their specific problems, such as poverty or lack of health care.

Question 4: We know that to solve the problem of gender inequality in the workplace, it takes everyone, not just women and girls. What is the role of boys and men in promoting and enabling gender parity and how do we implement this?

The participants spoke on how we must speak up on this issue to people in positions of power, and instead of mansplaining, have men give the women the chance to lead. We must stop asking for permission and stop being hesitant to pursue our dreams, as there are no gatekeepers between women and skills. We must recognize that instead of men losing their power, men are sharing their power with women. Since people don't associate things with one another at a young age, we should put this issue in young minds so they accept and understand these roles before false social norms brainwash their perceptions.

Question 5: One of the UN Sustainable Development Goals (SDG 4) focuses on quality education by ensuring inclusive and equitable quality education and promoting lifelong education opportunities for all. What is the contribution education has on ensuring gender equality equality, especially in fields that are male-dominated, and how can we use more effective education to promote parity in the sciences?

The participants discussed the importance of education in inspiring people and how it's important to have more programs where passionate girls are surrounded by like-minded girls, so they have the confidence to go into science. Educators need to reach out to girls and aid them if necessary, as there's the mindset that science is too hard, but in fact science is not hard if students have the equipment, education, and effective teachings to pilot their path into STEM. Everything starts in the classroom and we must stop teachers from discouraging students by telling them it's impossible for them to become scientists. Gender bias is also something boys face, and to address that issue, we must stop grouping careers into "male-dominated" and "female-dominated" fields, as it's perfectly ok for a woman to go into a field that was traditionally for men and vice versa.

Question 6: Another Sustainable Development Goal (SDG 7) focuses on affordable and clean energy. As you know, some children in developing countries live in homes without electricity, so they must use harmful kerosene lamps to study at night. This affects students' ability and effectiveness at studying, which impairs their education, job choices, and careers. What actions should be taken so girls and boys can have the necessities to get an adequate education?

The participants discussed how with access to electricity, students are able to learn more and more effectively. If students learn how clean energy works and how it's maintained, they could implement that in their communities to help more students in the long run, as we should give them a hand up as opposed to a hand out so these practices are sustainable.



Question 7: What types of additional support are needed for girls to continue a STEM track in college and ultimately towards a STEM career?



The participants discussed how international students face a big barrier when applying for post-secondary education: funding. Often times, post-secondary education can be extremely unaffordable for families, and that can be a barrier between a girl and their ideal education. That is why corporations should consider private funding and sponsorships for students of less fortunate economic backgrounds to get the equal chance to succeed. Although a lot of girls may be interested in the sciences in the beginning, often a lot of girls drop STEM in high school or in university; this

can be avoided with mentorship. Mentorship comes in two packages: mentorship at home and mentorship with specialized programs. When students are encouraged to pursue STEM at home, they will have the foundation to success, as their family is who they spend most of their childhood time with. Mentorship programs are very important, as role models can clarify your goals and make them seem more realistic; they can show you the way, show you that it's ok to make mistakes, and help you realize your full potential. This can help retain interest in science for girls. Of course, science is not all about best marks and being the very best. We must change the idea that you have to be the best at something to want to learn it and be interested in it; our world is so competitive now that we believe that you learn to be the best, veiling the main reason why we learn: because we are engrossed in something, and passion is the drive for success.

Question 8: As you know, women and girls face a lot of hardships such as menstruation, pregnancy, and maternity leave, where this all affects their employment and career. What can we do to alleviate this?

The participants discussed how we must have stricter policies to ensure women are given adequate attention and care during this turning point in their life, and invest in better compassionate and empathy training for companies and hospitals so they are better able to serve and care for women. In some countries, there's unpaid or very low-paying maternity leave for women in all careers. This puts copious amounts of stress for women who want to have a child but are also worried about not keeping their job and not having the financial resources to care for the child. We need to eradicate the mentality that pregnancy and maternity should get in the way of employment, and offer women not only paid maternity leave but also additional support for them. It's a woman's right to have a child and it's the company's responsibility to uphold that important right (which directly or indirectly affects everyone around the world). Pregnancy is not only a woman's issue—it's a family issue. It is the responsibility of both parents to be there for their child, which is why maternity leave should be extended to paternity leave. Kids need both parents to be with them during a crucial part of their lives, so their parents must be able to balance their employment with their family-time.



Question 9: Is the glass ceiling broken, and if not, how can we break it for careers in the sciences?

The participants discussed recognition, noting that it's hard to advance in your career if you're not recognized in your field (for example with prizes), and how without that advancement, it's very difficult to become a leader. That is something lacking and something we must work on, as female's successes are equal to those of men. Some girls may be interested in science but are unaware of the many careers opportunities in the sciences, which is why we must educate them on the broad and unlimited scope of STEM careers and what it can be for them. To break the glass ceiling in the long run, we must ensure that teachers are continually encouraging students to be confident in the classroom, so they can carry that confidence to their work environments. To break the glass ceiling at an even faster rate, we must reduce competition between women. There's more camaraderie between women when they're working together, and the movement becomes stronger and more powerful with collaboration. Lastly, the glass ceiling may be cracked with feminist movements of the past, but it will not be broken unless we fix the gender pay gap for equal pay for equal work.



Mr. Andrew Muetze, then closed the debate by acknowledging the role of the chairs and the participants.



During lunch break, Mr. Andrew Muetze helped Miss Rebecca Jekogian, Miss Talya Ozdemir and Miss Huaxuan Chen to draft the recommendations.

Huaxuan Chen took the lead in searching United Nations Documents and prepared the Recommendations in the International Community format.



To Our Future Colleagues

“At our Panel, we talked about the Problems and we found Solutions...

We have made the beginning: the Solutions which will be started by you and finished by us...

We are the participants of the first “Girls in Science” Panel of the 3rd International Day of Women and Girls in Science represent to you the outcome of our panel, to support Equality and Parity in Science for Peace and Development...”

Rebecca Jekogian, Talya Ozdemir and Huaxuan Chen

Recommendations

Preamble

Anchored in the voices, expertise, stories, rightful opinions and experiences of young people - especially girls - to inform discussions of the International Day of Women and Girls in Science Forum on its priority theme of “Equality and Parity in Science for Peace and Development,” we the participants of the first Girls in Science Panel present the Outcome Document to support Equality and Parity in Science for Peace and Development.

Recognizing that gender and science careers are not binary, and that it is crucial to adopt and implement policies, resource programs, and projects to empower girls to go into STEAM (Science, Technology, Engineering, Arts, and Mathematics) subjects.

Prioritizing marginalized voices requires the creation of space to ensure full and meaningful participation of young girls in all their diversities, especially those in rural areas, refugees, and those from developing countries.

Achieving the Sustainable Development Goals (SDGs), with a spotlight on SDG 17, Partnerships for all the Goals.

Actively engaging all boys is a necessity to promoting the rights and equal standing thereof in supporting work toward gender equality, human rights, and empowerment of young girls through activism and advocacy in all spaces, especially in the workplace.

We, the diverse and equally valued attendees of the Girls in Science Panel held of the 3rd International Day of Women and Girls in Science Girls Forum held at the United Nations Headquarters on 9th day of February 2018, have collectively identified the following priorities:

1. Female Leadership in the Sciences

Request strongly that equal value be attributed to women’s leadership, as that of men, including equal leadership opportunities and opportunities to further their interests in the sciences for young persons of any association on the gender spectrum;

Support - technically and financially - the meaningful participation of young women in the creation and implementation of policies and programs that affect their lives;

Protect women from sexual harassment and abuse from colleagues in the workplace;

Protect and ***Promote*** the work of young girls by ensuring favorable conditions for their activism and facilitating access to information and resources;

Deal accordingly with those who abuse their rights and freedoms and who infringe on those of vulnerable parties;

Ensure systematic and devolved mechanisms for young women to meaningfully participate in decision making, especially that which directly affects them, and ensure that young women in these positions are visible as role models;

Invest in youth-led organizations, mentorship programs, and campaigns, especially at the grassroots; Implement quotas on female representation so girls get the opportunity to hold leadership positions, changing the nature faster in the workplace;

Recognize more girls with STEM awards and recognition to provide more credibility and support.

2. Technology and Innovation

Utilize social media to showcase female accomplishments and contributions to science;

Provide more students in developing countries with internet access to increase their access to valuable resources and advanced learning materials;

Ensure more students have access to electricity to improve education;

Educate girls on how to use various technologies, so they could implement it and teach it to their communities;

Invest in renewable energy to provide more students with clean and affordable electricity.

3. Partners and Allies

Recognize that men and boys play a very important role in advocating for gender equality in the home, at schools, and in the workplace;

Collaborate with boys and men as partners, not competitors, to achieve sustainable development;

Encourage girls to support other girls to achieve their best;

Incentivize all members of the company/school/workplace to advocate for gender equality, equal pay, and maternity leave support;

Encourage boys to understand that girls are equal to boys and that it's the status quo that girls are in non-traditional careers;

Emphasize the idea of power sharing as opposed to power transfer between men and women.

4. Education and Skills Development

Provide scholarships for international students to achieve their dreams with adequate funding;

Provide students with mentorship opportunities, both at home, and through educational programs, to retain interests in STEM careers;

Engage children at younger ages to break the glass ceiling and eradicate false preconceptions in the future;
Encourage girls to follow their passions to ensure lifelong learning;
Counter the mindset that one must be the best at a subject to pursue it;
Ensure teachers are educating equality practices and encouraging all students to follow their dreams;
Accept others and their strengths, and work together to achieve common goals.
Provide equal and adequate education for all;
Support and attend to students' different learning styles to achieve most effective and student-centered education;
Support online distance learning, including social media, apps, and other technological advances, and synchronized learning for those in rural areas and developing countries to advance learning.

5. Health and Safety

Provide empathy and compassionate training for hospitals and doctors;
Provide adequate equal opportunity family leave so fathers and mothers can work and take care of their children together;
Create laws on domestic violence to ensure women are being treated equally in the home;
Include women in clinical studies to understand how women are affected by diseases.

Conclusion

With only 12 years to achieve the Sustainable Development Goals, we the participants of the Girls in Science Panel call upon Member States to continue and increase their political and financial support for young women's leadership and journey to become scientists.

We call upon policy makers and governments to adopt this outcome and continue to support the International Day of Women and Girls in Science to achieve sustainable development for all.

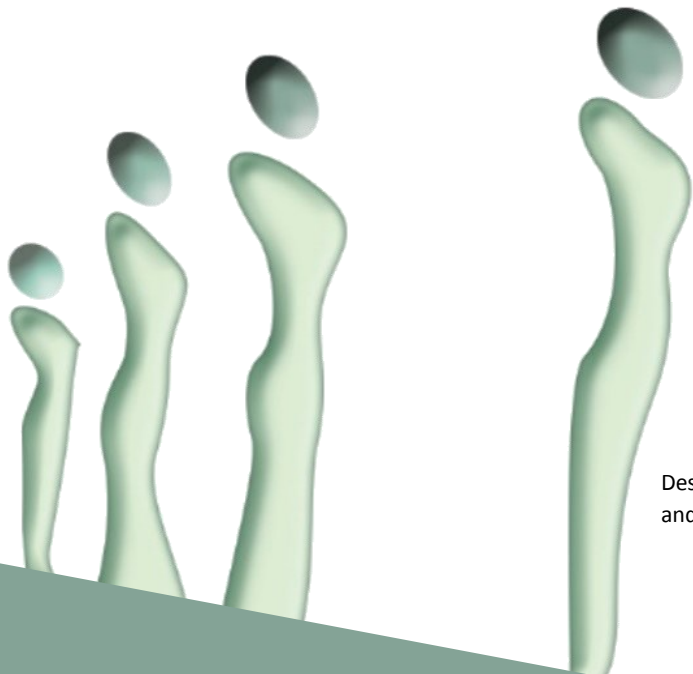


International Day of Women and Girls in Science

#February11

“We celebrate the achievements of known and unknown women, remembered or forgotten, who initially paved the way for those who come later in every walk of life, as well as to provide an opportunity to all girls and boys to choose role models in science”

—Princess Dr. Nisreen El-Hashemite, 11 Feb., 2016



Designed by Bilal Wazir, The Logo's color shows equality, equity and parity of science, and that science belongs to all citizens, male or female, rich or poor, young or old.