

WISET Gender-Forum Report

The Role of Gender-based Innovations for the UN Sustainable Development Goals *What are our next Steps in Korea?*



Thursday, January 28, 2016, 2-4pm

Korea Science and Technology Center
3rd Floor, Room 305



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1. Introduction by Dr. Heisook Lee

Heisook Lee, President of Center for WISET (Women in Science, Engineering and Technology) and co-organizer of Gender Summit 6 Asia Pacific (GS6AP) explained how the report entitled “The Role of Gender-based Innovations for the UN Sustainable Development Goals” introduced research activities connecting gender based innovation and sustainable development:

- 1) The report was produced following the recommendation at the GS6AP to integrate gender considerations in science and technology across all 17 of the UN SDGs. Its editors came from organisations such as the World Bank, Asian Development Bank, the International Monetary Fund, UNESCO, universities and development organisations in 10 countries. The Korean members included Dr. Paik Hee Young of KOFWST, Dr. Jang Yong Suk of STEPI and Green Technology Center Korea President Changmo Sung.
- 2) WISET co-organised a pre-launch event with the UN Sustainable Development Solutions Network Korea in Seoul in December 2015 with around 200 people, and a keynote speech from UNSDN Korea President Prof Young Soo-gil.
- 3) Launching the completed report, Dr. Lee invited advice and opinions on the report and on furthering this important agenda. Support and expertise from scientists, science policy experts, development experts, and international diplomats would be most valuable for future direction of gendered innovations to achieve the UN SDGs.

2. Summary of Dr. Elizabeth Pollitzer’s Presentation

Elizabeth Pollitzer, Director of Portia Ltd., UK, and Founder of the Gender Summits introduced the report entitled “The Role of Gender-based Innovations for the UN Sustainable Development Goals” outlining how new understanding of sex differences could inform implementation of the SDGs. For example:

- 1) biological differences in women and men (e.g. *metabolic profiles; immune responses*)
- 2) biological differences in male and female plant and animals’ growth and reproduction
- 3) differences in impacts of e.g. pollution; disease; health technology etc. due to cultural gender differences
- 4)

She outlined steps that could be taken to further this agenda as:

- 1) Linking understanding of scientific evidence with context to better inform: strategies, programmes, projects, and dialogue
- 2) Advancing robust scientific evidence and providing access to technical expertise
- 3) Advancing indicators and monitoring frameworks for wider adoption of gender sensitive approaches
- 4) Promoting conditions for gendered research and innovation to be embedded in SDG programs, projects & dialogue

She summarized major goals as being to:

- 1) Promote knowledge exchange partnerships between research and innovation community and major actors in development and aid to connect scientific evidence with context.
- 2) Monitor and raise awareness of the available SDG-relevant scientific evidence, and keep identifying gaps in knowledge where new research is needed
- 3) Promote production of, and monitor progress in the adoption of sex-gender evidence and of robust sex-gender analysis methods in the implementation strategies, programmes and actions for SDGs

3. Summary of Contributions

Participants congratulated on the report as a “wonderful start” on introducing the gendered innovations agenda, especially in Korea where headway had been made since the concept was first discussed in just the last couple of years. However, many challenges lay ahead such as refining terminology; determining meaningful indicators (and localization for Korea); disaggregating concepts of women’s equal participation (e.g. as scientists and researchers); empowerment (e.g. having their voices heard as decision makers) and the concept of gender-based innovations in the science itself. Further opportunities could be found in interdisciplinary research, further including the private sector, international cooperation beyond the UN framework and many other areas. Organisers thanked contributors for their varied perspectives on the report.

Soogil Young, Member of the Leadership Council of the UN Sustainable Development Solutions Network (SDSN) and Chairman of UNSDSN-Korea 1) appreciated use of the phrase “Gender based solutions/innovations” as less ambiguous than “Gendered Innovation” – but advised the terms “gender sensitive/responsive research” and “sex/gender analysis” should also be clearly defined. 2) noted some report passages suggested elimination of gender inequalities under SDG5, a justifiable topic already covered by the SDG directive that targets and indicators be disaggregated as much as possible by sex. WISET will be one of many stakeholders checking progress by looking at indicators by group (e.g. female/male). 3) Identified the report’s two proposals of i) eliminating gender inequalities in research participation (an important and appropriate agenda to be pushed by WISET) and ii) research to better understand impact of gender sex differences in human and natural living organisms. He questioned the perceived subtext that women scientists are better placed to research gendered innovations, suggesting that male scientists may not necessarily be gender blind. He suggested identifying male and female researchers’ comparative advantages on gendered innovation research as a research topic itself. He also suggested the report’s list of topics may be too long for UN organizations to digest for effective utilization. The UN will launch around 230 indicators for the 169 SDG targets in March 2016, which countries should adapt to their context. He suggested WISET contribute to this localization exercise, applying gender disaggregation to localization of

budgets, targets and indicators, analyzing Korea's readiness for the SDG targets as women scientists, exploring applicability to Korea and suggesting what should be adopted/explored to address gender gaps. The indicators should be examined and applied to the Korean context to assess (for example) how far Korea is in terms of gender sensitivity in working toward the final target in 2030.

WISSET should develop a time sensitive action agenda to further its cause. The UN High Level Forum will convene its first review meetings July 11-20, 2016 and Korea is one of about 15 countries volunteering for its own national review. Also, the UN ESCAP forum on Sustainable Development follow-up and review mechanism to discuss work in Bangkok on SDGS April 3-5 regional forum peer review in Asia Pacific exploration for opportunities for cooperation. WISSET may want to contribute to that forum.

Dr. Pollitzer remarked that Seoul Declaration item four calls for agreeing terminology, and stressed that all is not supposed to be in the hands of women scientists – 80% of science leaders are men so there are too few women in positions of responsibility to do that. It is more about women's empowerment than gender equality (SDG5). On many SDG targets we have too little [gender conscious] understanding and where we do it is not connected to implementation. For example, gender sensitive genetic engineering in food production (e.g. biochemical control on sexual reproduction of maize can be switched off to produce non-flowering plants).

The EU has indicators for gender equality in science but the situation remains unchanged. Indicators are important to know the status quo but we also need knowledge from research experts for practical implementation. The research evidence does not seem to be there to inform the ambitious SDGs. We need the best scientific knowledge to implement them for women and men.

Prof Young added that indicators are the starting point to gauge the distance to the ultimate target – once the gap is known, policy prescriptions can be made.

Carlos Vladimir Rubio Noguera, Head of Economic and Development Cooperation Affairs Section, Mexican Embassy in Korea, mentioned that Mexico will host the next gender summit with CONACYT. He asked how to translate this preliminary research to effective policy in Latin America, for example in a diverse country like Mexico with 64 official languages. He suggested cooperation on translating high level science into local level and state level government policies. **Dr. Pollitzer** highlighted sessions on gendered science and the SDG agenda planned for the Gender Summit 8 North and Latin America in Mexico April 28-29 2016 with attendees from around Latin America, and agreed that everyone needs a customized roadmap on what is achievable.

Heeyoung Paik, Former President of KOFWST (Korea Federation of Women's Science and Technology Associations) praised the report as an "important document," and stressed the need to encourage those in all science fields and countries for produce more sex and gender based research and data to inform work on gender equality. Most current research lacks a gender lens and there may not yet be enough data to have focused forums on each SDG. It is important to understand and scope future work on available knowledge. E.g. for SDG2 on hunger, the report focuses on food production but hunger is a human problem. With better understanding we can later find the correct pathways to progress.

Doe Sun Na, Vice President of the Korean Academy of Science and Technology approved of the term “Gender-Based Innovations” and of focus on the “urgent and tremendous job” of setting indicators on gender based innovations and many other factors in order to analyze the effects and outcome of this research. Gender equality and gender empowerment do not necessarily spring from gender based innovations. Now, especially in Korea, there are many women in science but not at leadership level. Gender based innovation, gender empowerment, and gender inequality have to come together. She congratulated all those beginning a new gender based innovation network in Korea with quick and innovative collaboration over the last 2 years.

Youngsuk Jang, Senior Research Fellow, Science and Technology Policy Institute (STEPI) of Korea called the report a “wonderful start”, taking a grassroots approach of identifying evidence, good practice and subsequent actions, but with many challenges ahead. He saw evidence and indicators as “absolutely necessary and critical” to foster public understanding and also saw the need to address government policies and frameworks. He explained his current interest in inclusive innovations (income, regional and industrial inequality) and pledged to promote this gender issue in inclusive innovation. He advised comfort in using new terminology: “As far as a clear concept can delivered and transferred why not make new terminology and share it?”

Sung-Nam Cho, Director of Ewha Institute for Leadership Development, agreed on the importance of indicators, and saw WISET’s role as developing methodologies and strategies to show women’s technological creativity and capacity for full utilization of talents for the SDGs. She presented the modules of 1) **Empowerment**: i) recognizing female scholars and scientists accomplishments; ii) gathering resources to emphasize the importance of fostering women scientists and engineers, iii) improving youths’ confidence, presentation skills and leadership capabilities); 2) Enlarging/engaging the **Network** of science and technology professionals; 3) establishing **Visions** of academic integration through lectures by diverse female scientists on science and culture, 4) **Social Responsibilities**: (by expanding women’s horizons to the global level, fostering women’s global leadership and challenges and reflections of female scientists.) and 5) **Convergence**: to promote leadership of the next generation of women. She stressed importance of “Creativity and Evolution of the Humanities”. The need for creativity in terms of gender-based innovation should be emphasized when fostering new science and technology, by making use of scientific methods of new convergence technology in STEM.

Sue Kinoshita, Deputy Head of Mission, British Embassy in Korea said the report found the right note for a layperson – inspiring and energizing consideration of research through the prism of gender. From a UK government perspective she suggested three approaches:

1. **Unilaterally**, offering to promote the report to UK government research organizations, NGOs, academia etc. and suggesting promotion to media through case studies;
2. **Bilaterally**, suggesting UK-Korea partnership could be forged in this area with complementary strengths of Korea’s knowledge sharing on recent development

experience and UK membership of networks such as the G7, Commonwealth, EU etc. She offered to help promote linkages between Korean and British practitioners, also mentioning ongoing UK-Korea collaborations in Africa (e.g. a project on maternal health and Sierra Leone);

3. Multilaterally, not just in the UN context, but also the hosting of both the G7 and G20 in Asia with gender issues prioritized. The G7 in Japan will promote female participation and empowerment and the G20 in China will discuss inclusive and interconnected development. She suggested consideration on how to link into these agendas.

Hye Jin Park, Communications Analyst of the United Nations Development Programme Seoul Policy Center, appreciated the importance of linking scientific research and innovation with policy development and action and praised the report as a first step in this direction. She mentioned that the UNDP SPC would launch the UNDP Human Development Report (HDI) in Korea in March, mentioning that Korea had fallen in country rankings of the Gender Inequality Index in this year's report to 23rd place, categorizing Korea as only a medium equality country below the OECD average. The 2016 HDI report focuses on work for sustainable development with two chapters on innovation technology and gender. UNDP will also host a workshop to tackle gender-based violence in Korea in March.

Eun Mee Kim, Dean of Ewha Graduate School of International Studies and Director of the Institute for Development and Human Security highlighted Ewha research on "Advocacy for Korean Engagement in Global Health and Development" which identified gaps in MDGs (Goal 4 infant mortality; Goal 5 maternal health) to be carried over to the SDGs and found that young girls (aged 9-18) need special attention as are the most vulnerable group given inadequate support especially in the areas of 1) sexual and reproductive health; 2) human trafficking; 3) malnutrition and lack/low level of educational opportunities in secondary schools; and 4) vulnerability to environmental hazards. She mentioned Korean President Park Geun-hye's launch of the \$200 million 5-year "Better Life for Girls" Initiative in 2016 as part of South Korea's official development assistance (ODA) in line with the SDGs.

Critical SDG actions include: 1) Interdisciplinary research between science/engineering and social sciences (gender and development studies) for empirical research on the Outcomes (Symptoms) and Causes of gender discrimination; and 2) Collect best practices for development assistance. These will help us understand the root causes and symptoms, to help find solutions to solve problems rather than merely respond to surface-symptoms without dealing with underlying causes.

E.g. post-Ebola Sierra Leone's rapid rise of unwanted pregnancy among young girls as schools were closed and girls are vulnerable to sexual violence and unwanted pregnancy. This case highlights gender as a basis for inquiry, research and intervention.

The SDGs have included new actors (civil society, businesses through CSR/CSV, and private foundations), and new goals of economic development and prosperity require multi-actor coordination beyond public-private partnership

(PPP). WISSET and Portia should also work to ensure gender is properly interjected into new multi-actor coordination.

Nobuko Kamira, Sustainable Development Officer and Gender Focal Point for UN ESCAP East and North-East Asia Office, mentioned the upcoming UNESCAP Asia Pacific forum as a chance for Korea to showcase leadership in science and technology innovation. She commented that gender has been focused on in development and in humanities but this report's consideration of science creating fascinating linkages between responses that differed from those coming out of the humanities research, giving a strong message to policy makers that different sorts of interventions are required that sometimes only the scientific field could contribute. A strong point of this initiative could be highlighting areas on which other research studies have not previously focused.

Krum Choi, President of the Korean National Council of Women cited the importance of big data analysis; teacher training and media. Her institution has 5 million women members, some of whom could be called upon to teach about gender based innovations. "We have to use the media technology to spread out gender-based innovations, and also through IT we can make a network of women and we can spread out gender based innovations," she said.

Hensel Han, Co-President, Citizens Coalition for Scientific Society NGO and Korea Economic Daily editorial writer, quoted Richard Nelson's work on the Innovation Angle - stating that big innovation for revolutionary change was only possible with innovations in physical technology (PT: science and research), social technology (ST: institutions, educations) and business (BP: entrepreneurship). This report has more focused on PT and ST but more is needed on the business side. Without entrepreneurs' self-motivated recognition of gender as a key component to be corrected there cannot be major social change ("big innovation"). He encouraged reaching out to entrepreneurs (men and women) as business partners to bring a more sustained and larger social change through innovation.

4. Discussion

Prof Young asked if market mechanisms could be harnessed to facilitate gendered innovation. **Dr. Pulitzer** considered where market mechanisms had galvanized the Millennium Development Goals (MDGs) such as in some fish farming; ICT; health and pharma. Discussions are ongoing on a gendered innovation eco system including markets, with the aim of producing good scientific evidence and arguments for industry on this agenda, she said. Women were currently underrepresented and underserved by markets, with well educated women lacking opportunities to express their ideas. She cited the "Valley of Death" of innovation with need to connect women's needs and ideas, adding that investment in women's education and bringing them into the process SDGs could help to bridge this.

Dr. Cho informed that Medical Peace Foundation's health centers in Sierra Leone (opening in February), Burkina Faso and Ghana included basic medical equipment but more advanced technology (e.g. complex medical scales) had been unusable because they went beyond the electricity and training capacity of the hospital. She stressed the importance of localization of different levels of science for the UN SDGs – from low to high level technologies in different areas.

Dr. Jang echoed the importance of markets as well as incentives for governments, which also shape markets. Stressing the benefit of gendered innovations can incentivize government action and create public incentives to make markets produce more gendered innovations. Evidence and indicators were needed not only at the technological level but also at the social level.

Dr. Na said that gendered innovation can happen in industry given that half of consumers and decision makers are women. For example, robot companions for elderly people required consideration of gendered interactions, as did women-centered cars.

Dean Kim pointed out that the SDG agenda brought new actors such as private sector, civil society and foundations on board providing a platform for coordination. Further, the SDGs are more focused on economic growth and human development (e.g. on *good* jobs) offering ways to include the private sector in dialogue. Because of new actors and issues multi-actor coordination (not just Public Private Partnerships) will be critical for success.

Dr. Young confirmed that Korea performs poorly on gender equality but well on innovation. Korea was among the worst in a UNSDSN ranking of OECD countries on gender inequality (on parliamentary participation) but among the first on innovation readiness (on R&D expenditure on GDP). Again he noted use of the expression “gender responsive/sensitive research agenda” in two senses: 1) gender inequalities in R&D participation, and 2) impact of gender/sex differences on human or natural organisms relevant to the SDGs. Both meanings are important but should be explicated in subsequent reports.

Mindful of the fact that “If you cannot measure it you cannot manage it” we need the UN indicators list being issued in March. We should work with Korean statistics to build a database to measure where we are in relation to eventual targets. He offered to submit a proposal (a few page summary drafted by Drs. Lee and Pollitzer) to the leadership council of the UNSDN to launch a thematic network consisting of around 100 voluntary participating scientists from around the world. Currently, the UNSDN sponsors 12 thematic networks (voluntary organizations participated by high ranking international experts to identify problems and develop solutions and propose them to governments around the world).

5. Written Contributions

- i) **Soogil Young**, Member of the Leadership Council of the UN Sustainable Development Solutions Network (SDSN) and Chairman of UNSDSN-Korea
- ii) **Doe Sun Na**, Vice President of the Korean Academy of Science and Technology
- iii) **Sung-Nam Cho**, Director, Ewha Institute for Leadership Development
- iv) **Hyunsil Ahn**, Co-President, Citizens Coalition for Scientific Society
- v) **Eun Mee Kim**, Dean and Professor, Graduate School of International Studies, Ewha Womans University

- i) **Soogil Young**, Member of the Leadership Council of the UN Sustainable Development Solutions Network (SDSN) and Chairman of UNSDSN-Korea

The letter of invitation to this forum from Dr. Heisook Lee and Dr. Elizabeth Pollitzer pointedly ask the panelists to speak for around 5 minutes to advise on what can be done in Korea to further the WISSET's agenda for gender-based scientific and technological solutions for the UN SDGs, now that the 17 SDGs have been adopted.

My first advice is about the use of the terminology, "gender-based solutions". Last time around, the WISSET initially used the term, "gendered innovation", and I said that this was too ambiguous and recommended replacing this with the term "gender-based innovation". The WISSET adopted my recommendation. I think that this was an improvement. But I think that there still remain ambiguities with this terminology as well as other related expressions such as "gender sensitive and responsibility research" or "sex-gender analysis". I think that the WISSET should be more explicit and clear about what it is after.

Are you proposing to eliminate gender inequalities in general as under the SDG 5? I don't think you are. But there are a number of passages in your report which suggest that you are.

This would be an immensely well justified cause and is properly addressed by the 2030 Agenda principle that the targets and the accompanying indicators should be as much disaggregated as possible, including by sex. The WISSET should endeavor to contribute to this cause, but WISSET will be one of many stakeholder groups which should do so. And further, this need not be done by women only, but by all those who may be concerned regardless of their gender identities.

Are you proposing to work to eliminate gender inequalities in research participation? I think you are. I also think that this would be a very important cause, as well as the right agenda to be pushed by the WISSET.

But then in the WISSET's report, there are also passages which suggest that you are urging to do research to better understand the impact of gender-sex differences in human and/or the nature's living organisms on problems and solutions for SDGs, as when the report mentions that in some fish species, the male grows bigger and in others, the female grows bigger.

The implied subtext here is that woman scientists would be better prepared for this line of research. This may be a good cause to pursue but I am not sure whether woman scientists are necessarily better qualified for this line of research than man scientists. However, there may be some research topics of this nature for which woman scientists may have comparative advantages over man scientists. If so, they should be identified and proposed as such. The question is, where are the comparative advantages that women scientists have in research and innovation.

I also have a couple of suggestions to make at a more practical level.

The WISSET's report is a long list of topics for researchers on what it calls gender bias in research and innovations. It is long enough to be encyclopedic. What I mean is that it is too long for any anyone such as UNSG Ban Ki-moon or an organization such as the UN to digest for the purpose of effective utilization of it. The WISSET should also consider the fact that, having launched the 2030 Agenda in January this year, the UN is preparing to issue its list of 230 or so Indicators corresponding to the 169 targets in March. Countries should be preparing to 'localize the targets and indicators, following this release of those indicators by the UN. And at the country level, all stakeholders should feel invited to contribute to this localization exercise. So should the WISSET Korea. In order to do so, the WISSET Korea should take a disaggregated look at the need to localize the targets and indicators. It should, first of all, assess Korea's SDG readiness by target from its perspective as woman scientists, and once the UN indicator set is released, explore its applicability to Korea. After this, it should propose what policy strategies should be adopted or at least explored to address the gaps. My second, and last point, is that the WISSET should develop a time-sensitive action agenda to advance its cause.

The UN HLPF will convene its first National Review meetings on July 11~20, and Korea will be one of about 15 countries which have volunteered to participate in this exercise. The WISSET Korea may want to hurry prepare to make an input into Korea's preparation for its own National Review.

Also, there will be held the UNESCAP APFSD to discuss work on SDGs in Bangkok on April 3~5. This will be a regional forum on implementation of the SDGs in Asia and the Pacific. The WISSET may want to provide an input for this forum.

ii) Dr. Doe Sun Na, Vice President of the Korean Academy of Science and Technology

First of all I wish to congratulate Drs. Lee and Pollitzer for publishing the great book *The Role of Gender-based Innovations for the UN Sustainable Development Goals Toward 2030: Better Science and Technology for All*. I wish to acknowledge to the tremendous efforts of Drs. Lee and Pollitzer and many other contributors.

There is no doubt that this book will serve as a guideline and textbook for researchers, institutions, policy makers and international organizations.

It is really great to see that the progress of the Gender-based Innovation project is quite remarkable in Korea.

Korean National Research Foundation already started the funding mechanism for this area, only after several month of the Gender Summit 6.

It is true that Korea is the most innovative country in the world, as reported by Bloomberg in the innovation index last week.

We can call year 2016 is a new beginning of the Gender-based Innovations. We can utilize the SDGs to build the better society for all through science, which is our mission. Dr. Pollitzer clearly summarized what we should do and how to approach.

I wish to emphasize the importance of collaboration and communication between ourselves as well as with the leaders in the society.

I will talk about my experience with of AASSA, Association of Academies and Societies of Sciences in Asia. As you may know AASSA organized a workshop during the Gender Summit 6 Asia Pacific “Gender Issues in Science Research and Education” . The participants of this workshop were mostly women members of the Science Academies in each country. They had the opportunities to participate in the Gender Summit 6. Most of them heard about the Gender based innovations for the first time.

Everybody said they would organize a workshop or symposium in their countries on the Gender based Innovations.

About a month ago I heard from Dr. Nadira Karunaweera, the Secretary General of the National Academy of Sri Lanka, who participated in the Gender Summit 6, will organize a session on Gender-based innovations during the General Assembly and Symposium of SCA, the Science Council of Asia which will be held in Colombo Sri Lanka in May 2016.

The participants of the SCA, the presidents of the National Academies, will have chance to learn about the Gender based innovations.

To achieve STGs that is related to science, it is important that the science leaders are aware of this area. In this respect the SCA meeting will be an excellent opportunity for science leaders to learn about this area. I was invited to participate in this meeting. I am quite sure that there will be more activities on the Gender based innovations with respect to AASSA.

Another example is my experience with the Korean Academy of Science and Technology, the KAST. Until 2 years ago women members in KAST was only 21 of 475 members, around 4%. During the last 2 years the women members grew to 30, around 6%. The absolute number is still quite low, but rapidly improving. Between 2010 and 2014 no women was accepted as a member. After I became the vice president in 2013, I kept trying in many ways to increase the number of women members. Women scientist committee was established in 2014 which I served as the Chair.

In 2015 and 2016, the percentage of women in the newly accepted members were around 18.1% and 17.9%, respectively, way above the women principal investigators that is around 7%.

I think women’ s empowerment in science can be achieved through continued efforts of many individuals like us and institutions such as WISSET, PORTIA, and many others.

Thank you for your attention.

iii) **Prof. Sung-Nam Cho**, Director, Ewha Institute for Leadership Development

Female scientists occupy very little space within Science & Technology fields, especially in Korea. Women continue to be underrepresented in business, in government, and in academia, especially in STEM fields. This creates lower expectations for the abilities of women, thus reducing their opportunities. At the same time, diverse perspectives are known to foster innovation and to improve business performance, which means it is important to increase the participation of women in the professional work.

We should bring in every possible idea and develop strategies in each step that can be taken to mitigate obstacles to equal participations. Fortunately, there is a growing attention to the “Gender-based Innovation” in the fields by raising a question of “Why it matters” and the importance of female perspective and thought to be acknowledged.

However, the issue of “How to succeed” is still a challenge ahead of us. We may further develop diverse indicators in each step in different levels based on diverse target groups and long-term as well as short-term goals in detail, especially for UN SDGs. We should pay attention to the methodological issues and develop various indicators, methods and techniques to evaluate equal participation and performance in gender-based innovation in various areas for diverse target groups in the STEM fields

We should aim to show the need for women to grow and showcase their ability in the male dominated fields. We need strategies how to show women’s creativity and capacity, which are ever-more importance in such areas in IT, Nano-technology, Aviation, and various convergence technologies, etc.

We also have to strive for further advance into the international arena through the cultivation and education of talented female scientists who will guide future change. WISET (with Gender Summit) can play this pivotal role to serve as a hub for the cultivation of international female scientists and engineers by driving future social change.

In this situation, we need kinds of efforts to foster such leadership in gender-based innovation in diverse levels. I think one of the important strategies is how to promote leadership of the next generation of women scientists and enable smoother progress in diverse convergence research programs in the year to come.

I thus would like to suggest that we provide meaningful opportunities to the future generation of women scientists, for full utilization of their available talents being critical to global prosperity and UN SDGs.

I suggest the programs that cover on the issues of gender, science, integration, and leadership, by developing 4-5 topics (modules) as follows:

1) Empowerment: ① to empower next generation’s women leadership in the field, the contributions and accomplishments of female scholars and scientists should be taught and recognized; ② to gather all available resources and capabilities in order to emphasize the importance in fostering women scientists and engineers and enhance the leadership of women in the said fields; ③ to improve the young generation’s confidence and presentation skills and strengthen their leadership capabilities.

2) Network: ① to enlarge the network of science, technology, engineering academics; ② to engage in a wide range of networking chances with the various sciences and technology professionals

3) Vision: ① to establish Visions of academics integration, this module may include lectures that provides the future prospects of science and culture to share experiences and insights with young generation women in different countries in diverse areas of global context; ② to share their stories and lives as female scientists and offer an opportunity to the participants to project themselves as an international leader.

4) Social Responsibilities: to help acknowledge Social Responsibilities as women scientists by expanding their horizons to the global level and how it continues to contribute to fostering global women leadership and the challenges and reflections of female scientists.

5) Convergence: to promote leadership of the next generation of women scientists and enable smoother progress in diverse convergence programs.

Lastly, I would like to add that we need to pay attention to the issue of “Creativity and the Evolution of the Humanities” in general, and the new convergence technology of science and the humanities, in specific. The need and importance of creativity in terms of gender-based innovation should be emphasized when fostering the development of new science and technology, by making use of scientific methods of new convergence technology that STEM should inspire for.

iv) Eun Mee Kim, Dean and Professor, Graduate School of International Studies, Ewha Womans University

1. The WISET-Portia’s report, “The Role of Gender-based Innovations for the UN Sustainable Development Goals,” is well-conceived and presented important gender-based scientific evidence that should be used for the implementation of SDGs. The report and the presentation helped clarify the key issues and brought attention to why we need gender-based innovations for SDGs.
2. Ewha’s research team from the Institute for Development and Human Security (IDHS) has received a research grant from the Bill & Melinda Gates Foundation in 2013 for the research on “Advocacy for Korean Engagement in Global Health and Development.” With this research, we were able to identify the gaps in MDGs (Goal 4 infant mortality; Goal 5 maternal health) that need to be carried over to the SDGs. We found out that young girls (aged 9-18) need special attention since they are the most vulnerable group that were not given due support and led to serious gaps in MDGs: (1) sexual and reproductive health; (2) human trafficking; (3) malnutrition and lack/low level of educational opportunities in secondary schools; and (4) vulnerability to environmental hazards. Our findings showed that “girls” were disproportionately exposed to these risks and thus needed to be helped in order to improve infant mortality and maternal health.

President Park Geun-hye of the South Korean government has announced the “Better Life for Girls” Initiative at the UN Development Summit in September 2015 to great interest and support from the global community. This new initiative will be launched in 2016 for five years with a funding of \$200 million, which will come as South Korea’s official development assistance (ODA) in line with SDGs.

The Ewha's research team's findings have been used for the development of this new initiative.

3. It is critical that we do the following in order to move forward with SDGs: (1) Interdisciplinary research between science/engineering and social sciences (in particular gender studies and development studies) in order to conduct empirical research on the Outcomes (Symptoms) and Causes of gender discrimination in the above-mentioned vulnerabilities for girls and women; and (2) Collect best practices for intervention using development assistance. These two efforts will help us understand the root causes as well as symptoms, so that we can find solutions to solve the problems rather than merely respond to surface-symptoms without dealing with the underlying causes.
4. An example from Sierra Leone about the post-Ebola situation with a rapid rise of unwanted pregnancy among young girls alerts us to review social events that do not seemingly have a gendered issue. The Sierra Leone case has come to our attention since a large number of girls have become pregnant during the Ebola crisis, as the schools were closed and girls were left vulnerable to sexual violence and unwanted pregnancy. This case reminds us to look into gender as a basis for inquiry, research and intervention. This cannot be repeated again in other contexts in the future. Thus, we must work together to prevent this in the future and also deal with the unfolding crisis in Sierra Leone.
5. As the SDGs has been inclusive of new actors including civil society, businesses through CSR/CSV, and private foundations, and also of new goals of economic development and prosperity, the global community must work diligently with multiple-actor coordination going beyond public-private partnership (PPP). WISSET and Portia should also work hard to make sure gender is properly interjected into this new multi-actor coordination that has become ever more important in the SDGs.

The need to coordinate with the private businesses and media to harness their transformative power through entrepreneurship and public awareness, respectively, has been emphasized.

6. DATES OF UPCOMING EVENTS

March, 2016

Indicators announced for UN SDG targets
UNDP SPC Human Development Report Launch

April 3-5, 2016

UN ESCAP forum on Sustainable Development follow-up and review mechanism in Bangkok

July 11-20, 2016

The UN High Level Forum will convene its first review meetings (Korea is one of about 15 countries volunteering for its own national review) WISSET may want to provide an input for that forum.

7. Dr. Pollitzer's Presentation

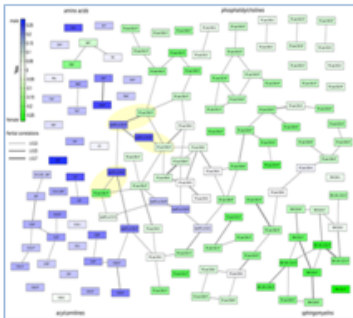
The Role of Gender-based Innovations for the UN Sustainable Development Goals

“What are our next steps?”

Elizabeth [Pollitzer](#), Portia

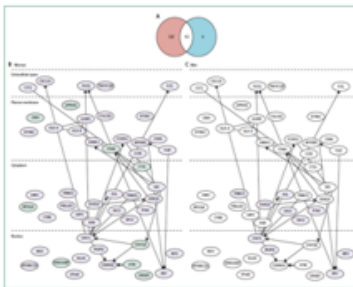
WHY ARE WE DOING THIS?

New understanding of sex differences, e.g.



Metabolic profiles of women and men are different

Relevant to SDG2, SDG3, SDG17

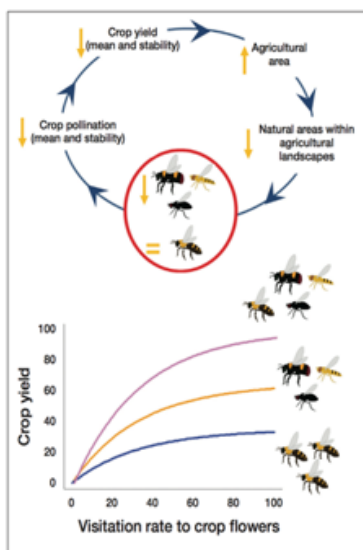


Immune response to vaccines differs between women and men

Relevant to SDG 3; SDG 6; SDG17

GS6 Seoul 27 August 2015

New understanding of reproduction in plants, e.g.

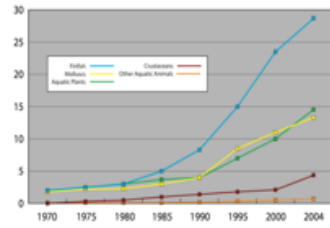


Pollinators improve yields and quality of plant food – knowing how plants attract pollinators can improve these effects

Relevant to: SDG1, SDG2, SDG3, SDG5, SDG15

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New understanding of reproduction in fish, and of marine ecosystems, e.g.



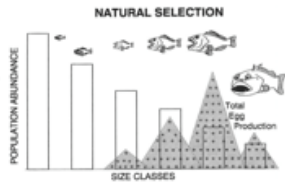
Increasing women's role in aquacultures as food producers

Old fish produce lots of high quality eggs

Relevant to: SGD1; SDG2, SGD3; SGD5; SGD8; SGD17

Managing fish stocks and protecting marine biodiversity

GS6 Seoul 27 August 2015



Opportunities to use new technologies to achieve cross cutting gender benefits, e.g.



Dirty water kills more women than AIDS



1.5-2 million children under 5 annually die from diarrheal diseases

Relevant to: DG1, DG2, DH3, DG4, DG5, DG6, DG8, DG17



64 million people travel from developed to developing countries, 20-50% suffer traveller's diarrhea

Opportunities to make science and technology more widely accessible, e.g.



Photo of hand-held disease detector



Photo of phone ultrasound device

Involving public in monitoring diseases



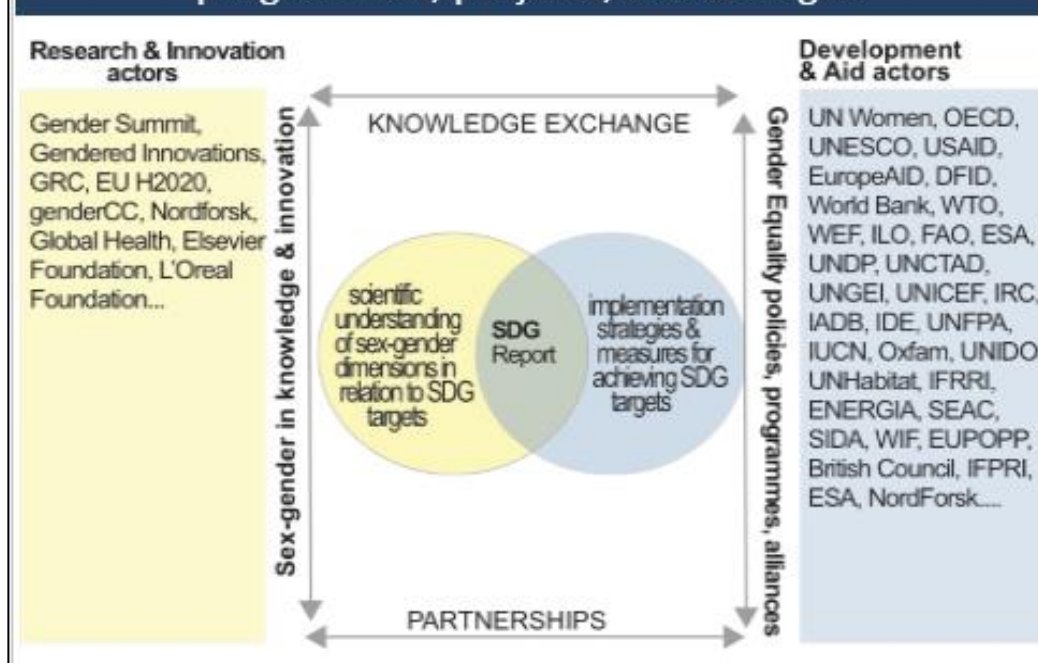
Relevant to: SDG3, SDG4,
SDG5, SDG11; SDG17

Empowering through knowledge



HOW WE CAN MOVE FORWARD, TOGETHER

Step 1: Linking understanding of scientific evidence with context to better inform: strategies, programmes, projects, and dialogue



Step 2: Advancing robust scientific evidence and providing access to technical expertise

- Set up a strategic scientific advisory board with leading experts
- Improve dialogue between researchers and development practitioners, e.g. using on-line portals such as EU Biodiversity4Life or GenPORT
- For each SDG, develop case studies showing benefits of applying strong and rigorous sex-gender analysis methods
- Build capacity for change by supporting existing monitoring criteria, e.g. OECD DAC *gender equality marker*; *Busan Action Plan*
- Promote sharing of experience and expertise, e.g. Gender Summit, <http://capacity4dev.ec.europa.eu>, <http://genderedinnovations.stanford.edu>

Step 3: Advancing indicators and monitoring frameworks for the wider adoption of gender sensitive approaches

- Promote concerted approaches by interlinking existing efforts to collect good data, e.g. UNESCO; UN Women; EU She Figures; NordForsk She Figures for Nordic countries; Inter America Development Bank; World Economic Forum Gender Equality Index; GenderInSITE;...
- Demonstrate practical examples of SDG implementation actions linked to the Seoul Declaration principles
- Promote creation of institutional Roadmaps for Action to advance gender conscious design, monitoring and evaluation of programmes and projects, with short-, medium, and long-term objectives
- Increase coherence between the three key areas: education, research/innovation and development/aid, e.g. sensitising teacher training, curriculum, and outreach activities to gender issues

Step 4: Promote conditions for gendered research and innovation to be embedded in SDG programmes, projects & dialogue

- Produce policy briefs to reinforce coordination of efforts between different actors
- Produce knowledge synthesis reports relevant to the targets of each SDG
- Identify/recruit policy and management level champions from amongst relevant actors
- Promote cross cutting benefits of adopting sex/gender conscious research and innovation
- Work through and together with media to increase public awareness of the benefits of gendered research and innovation, e.g. SciDev

Summary of major goals

1. Promote knowledge exchange partnerships between research and innovation community and major actors in development and aid to connect scientific evidence with context.
2. Monitor and raise awareness of the available SDG-relevant scientific evidence, and keep identifying gaps in knowledge where new research is needed
3. Promote production of, and monitor progress in the adoption of sex-gender evidence and of robust sex-gender analysis methods in the implementation strategies, programmes and actions for SDGs

8. Forum Agenda

**The Role of Gender-based Innovations for the
UN Sustainable Development Goals**
What are our next Steps in Korea?

Thursday, January 28, 2016, 2-4pm
Korea Science and Technology Center
3rd Floor, Room 305

What can we do in Korea to promote gender considerations in science and technology for development?

This event marks the launch of the report by WISSET and Portia UK: ***“The Role of Gender-based Innovations for the UN Sustainable Development Goals - Toward 2030: Better Science and Technology for All”*** produced following the Gender Summit 6 Asia Pacific (GS6AP), which was held in Seoul in August 2015.

Event Schedule

- 1:50 - 2:00pm:** Arrival, coffee
2:00 - 2:10pm: Prof Heisook Lee - Introduction & welcoming remarks
2:10 - 2:30pm: Dr Elizabeth Pollitzer - Report presentation
2:30 - 3:45pm: Individual comments from attendees (5 mins each)
3:45 - 4:00pm: Q&A for Prof Lee and Dr Pollitzer

The report was produced following calls at the GS6AP to integrate gender considerations in science and technology across all 17 of the UN SDGs. It was compiled with the help of 27 experts in science and development from ADB, UNDP, UNESCO, the World Bank, various universities and other organizations around the world. It cites 170 examples of research demonstrating need for a sex-gender sensitive approach to science for development, and more than 150 topics requiring further investigation.

This event will share existing research, and discuss what can be done next to realize gender considerations in all areas of the international sustainable development agenda. After an introduction from Gender Summit founder Dr. Elizabeth Pollitzer, guests are invited to offer their expert reflections and advice. Participants may wish to comment on the report, give examples from their own field, countries, or organizations – or may suggest next steps that those in Korea could take to further this agenda. We also warmly invite you to share the report widely with your colleagues and networks.

Hosts*

- **Heisook Lee**, President, Center for Women in Science, Engineering, and Technology (WISSET)
- **Elizabeth Pollitzer**, Director, Portia Ltd., UK; Gender Summit founder

Attendees

- **Hyunsil Ahn**, Co-President, Citizens Coalition for Scientific Society
- **Sung-Nam Cho**, Director, Ewha Institute for Leadership Development
- **Keum Choi**, President of the Korean National Council of Women
- **Youngsuk Jang**, Senior Research Fellow, Science and Technology Policy Institute (STEPI) of Korea
- **Nobuko Kajiura**, Sustainable Development Officer, Gender Focal Point, UN ESCAP East and North-East Asia Office
- **Eun Mee Kim**, Dean, Ewha Graduate School of International Studies, Director, Institute for Development and Human Security
- **Sue Kinoshita**, Deputy Head of Mission, British Embassy in Korea
- **Whan Lim**, Intern, United Nations Development Programme Seoul Policy Center
- **Doe Sun Na**, Vice President, Korean Academy of Science and Technology
- **Heeyoung Paik**, Former President, KOFWST (Korea Federation of Women's Science and Technology Associations)
- **Hye Jin Park**, Communications Analyst, United Nations Development Programme Seoul Policy Center
- **Carlos Vladimir Rubio Noguera**, Head of Economic and Development Cooperation Affairs Section, Mexican Embassy in Korea
- **Soogil Young**, Chairman, UNSDSN-Korea & Member, Leadership Council, UN Sustainable Development Solutions Network (SDSN)

**All names are in alphabetical order*

About WISET

In 2011, The Korea Center for Women in Science, Engineering and Technology (WISET) was commissioned by the Korean Ministry of Science, Education and Technology and the Korea Advanced Institute of Women in SET (Science Engineering and Technology) to create conditions under which women can play a central role in science and technology sectors. WISET aims to establish a total support system for Women Scientists and Engineers. <http://www.wiset.re.kr/main.jsp>

About the Gender Summits

Set up in 2011, the Gender Summit is a platform for dialogue where scientists, gender scholars and policy makers, as well as key stakeholders in scientific endeavors, meet to jointly examine new scientific evidence showing when, why and how gender issues impact research and innovation outcomes and what actions are needed to make improvements. Since 2011, the Gender Summit has evolved into several regional platforms in Europe, North America, Africa, Asia Pacific, and Latin America. The Gender Summit 6 Asia Pacific was held in Seoul, Korea, in August 2015. See <http://www.gender-summit.com>
