

Advancing Gendered Innovations in S&T Research in Korea



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<http://gister.re.kr/#!/main>

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19th GENDER SUMMIT – GLOBAL FOR SDGs

Shaping Research and Interventions Agendas

for the next 10 years

24-25, June, 2020, Seoul, Korea

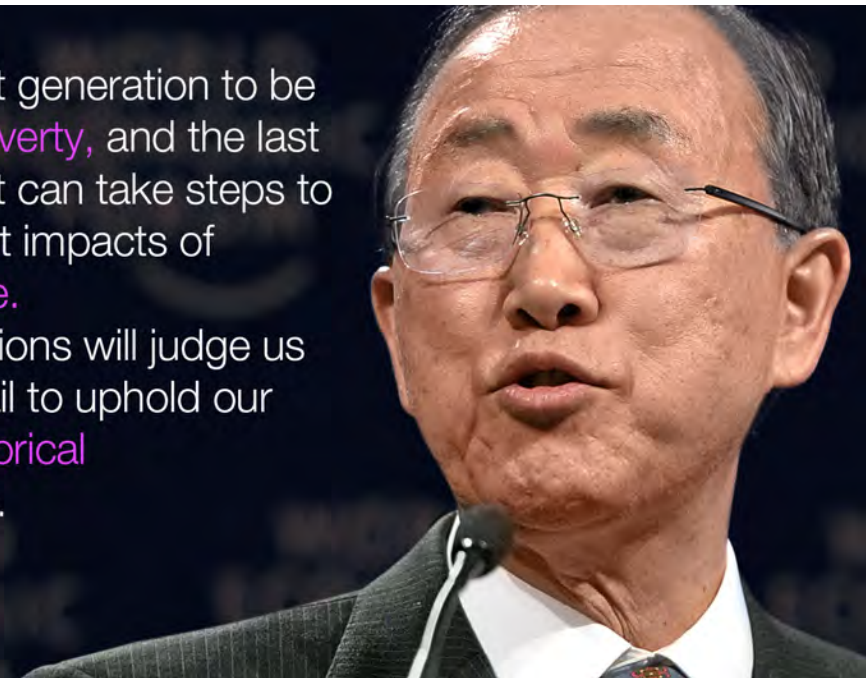
Guest of honor & Plenary speaker
Mr. BAN KI-MOON,
Former Secretary general of the UN

Goal of GS-Global for SDGs is to bring together key players organizations that are actively advancing knowledge & practice for effective implementation of SDG targets, even if the topic of gender is not at this stage given the priority it should, as demonstrated by scientific evidences.

We are the first generation to be able to **end poverty**, and the last generation that can take steps to avoid the worst impacts of **climate change**.

Future generations will judge us harshly if we fail to uphold our **moral and historical** responsibilities.

Ban Ki-moon
Secretary-General
United Nations



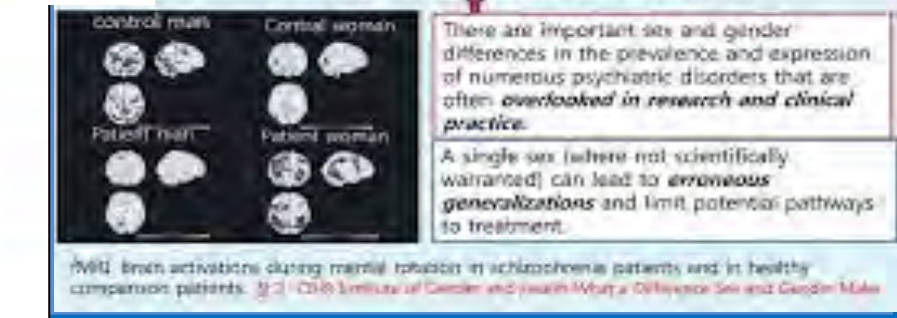
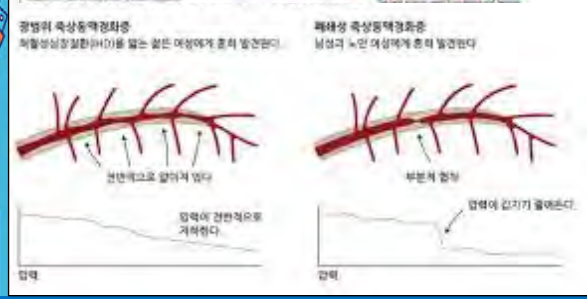
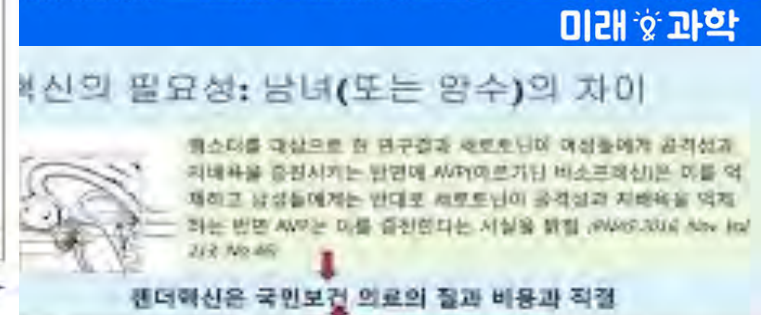
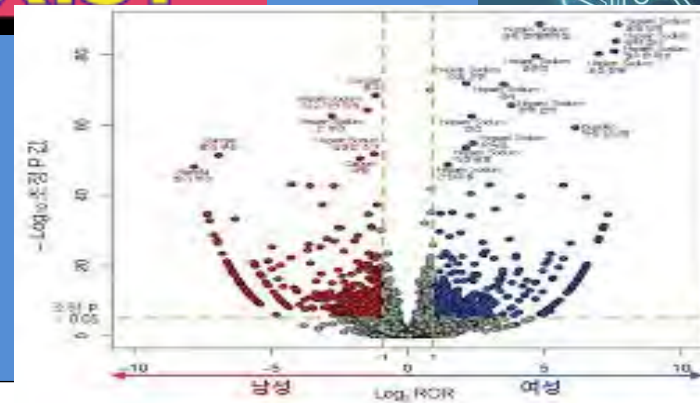
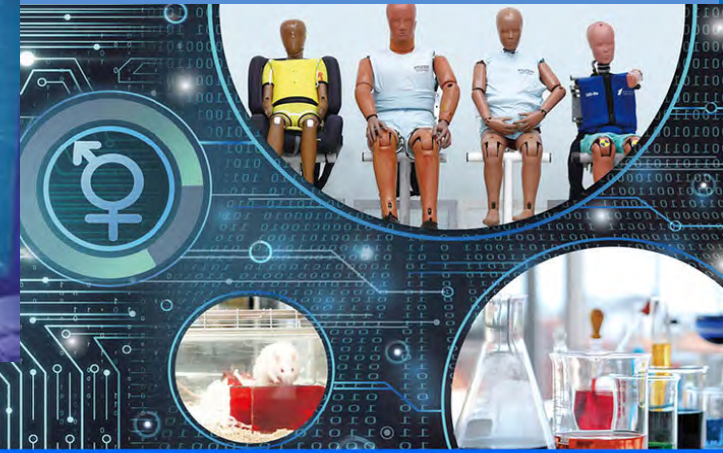
See you all
in Seoul, Korea
on June 24-25, 2020



Why Gendered Innovations? To fix knowledge gender gap

Technology reflects developers, investors view

Many technologies made by men & tested on men

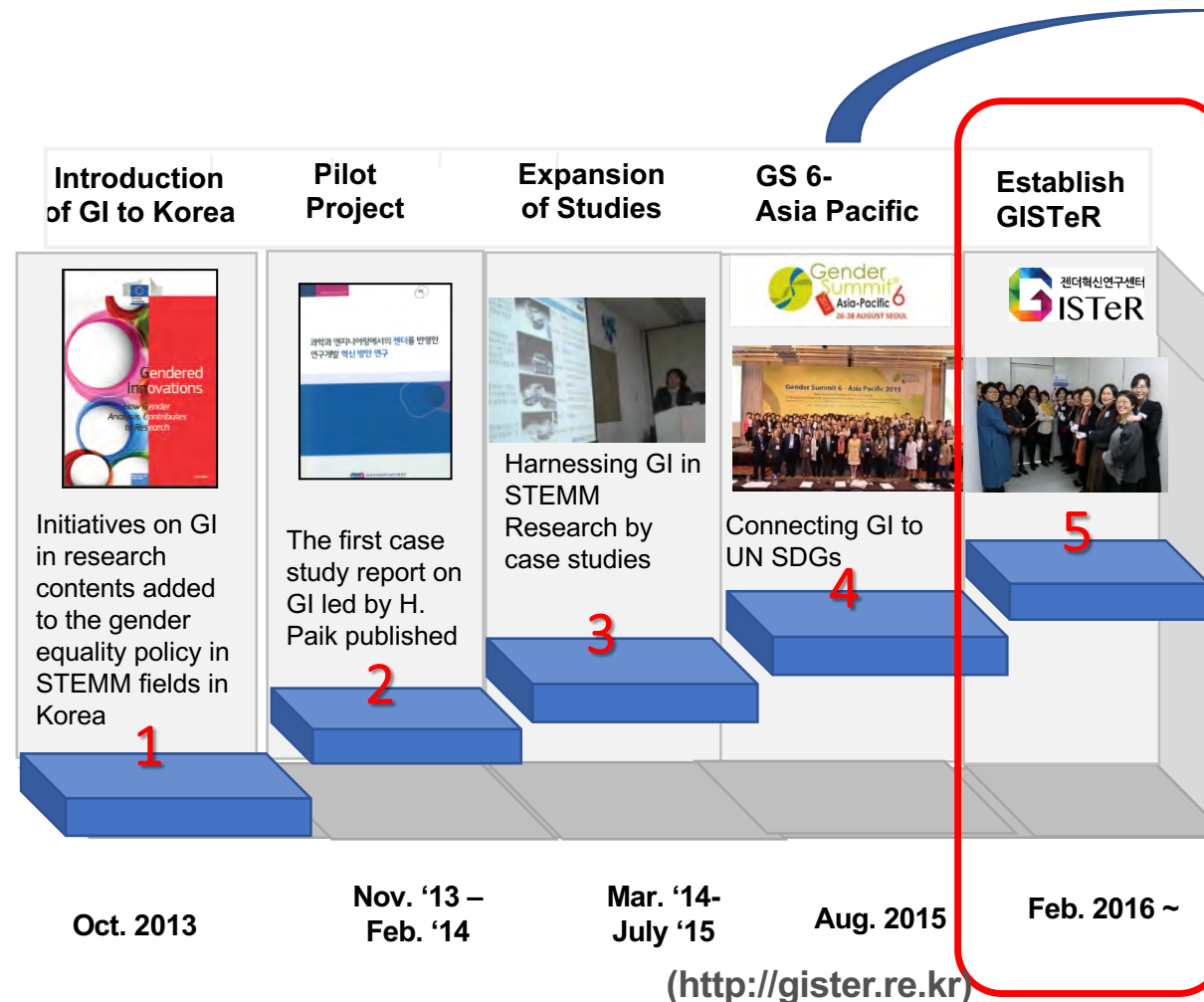


Gendered Innovations Initiatives in Korea

GISTeR's Initiatives: Promote Gender Inclusive R&D in Korea

Gendered Innovations introduced in Korea in 2013: WISSET – KOFWST – GISTeR

Gender Equality in STEM in Korea focused on
-Fix the number
-Fix Institutions



Initiatives for Gendered Innovations in Korea

Research Activities of GISTeR (2016-2019)



Case Study Team led by Hee Young Paik

Basic Science

Health/
Nutrition

Engineering/
Technology

Architecture/
Environment

- 18 case studies in 4 areas developed;
- currently 14 research topics
- ~25 scientists(PI Level) have participated
- ~40 papers published in peer-reviewed journals

GISTeR supports
Research meetings:

1. Develop ICT for informed climate change adaptation solutions in South East Asia
2. Gender Bias in AI
3. Addiction and Gender
4. Smart City and Gender

Activities for Policy development and diffusion of GI in Korea

Policy Research Team led by H.Lee

- **Proposed legal basis needed to implement GI sustainably**
- **Made Research funding policy recommendation**
- Dissemination of GI and Guideline development
- Made recommendation to KOFST for journal publication
- Curriculum development for higher education

Amendment of Framework Act on Science and Technology (Moved by Hon. Rep. S.M. Lee) **in process**

NRF introduced Funding policy integrating Gender dimension to Bio Medical Sciences in 2019

Guidelines for researchers and experts published

Policy recommendation to KOFST (support for Journal publication) is in action since 2019

-Graduate course in Gender-based Medicine
-Introducing of GI to Eng. Course In 5 colleges

GI included in the 4th Framework for supporting Women in STEM(2019-2023) as one of the 4 main strategies. Not enough because GI is not women's issue but a 'paradigm shift' for better science and technology

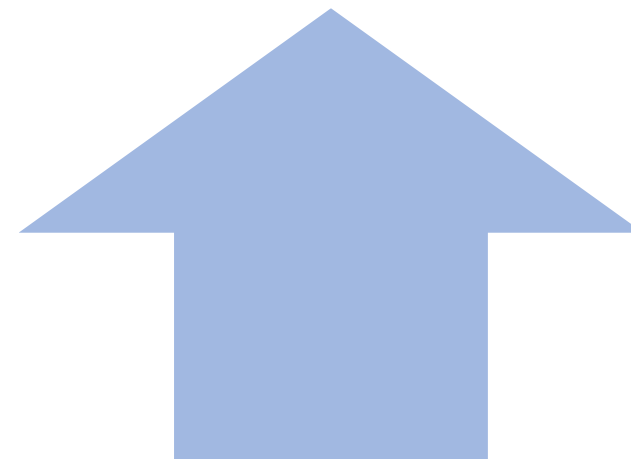
Diffusion strategies of Gendered Innovation: need all stakeholders



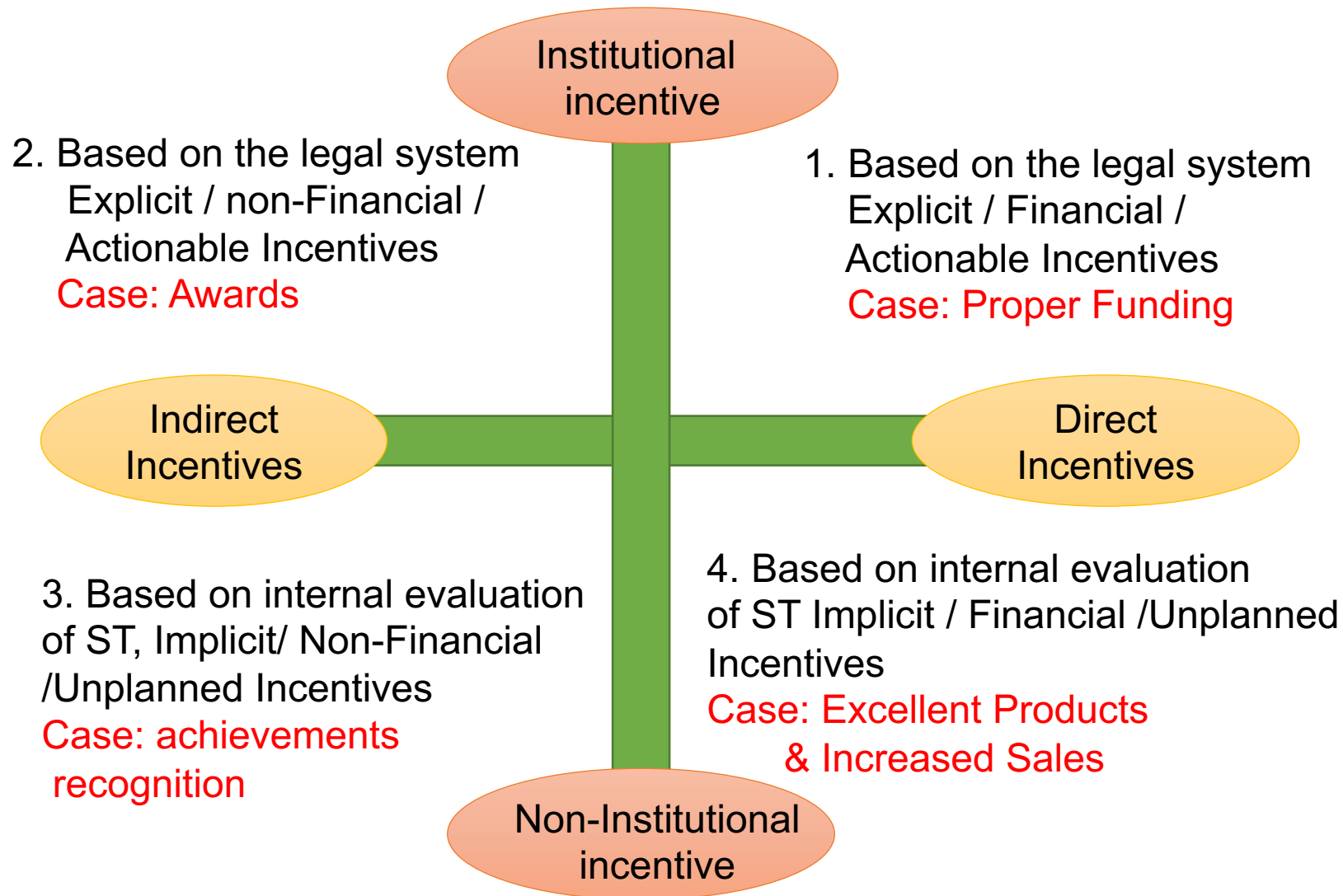
Governments, public & private sectors: Vision setting, Legal basis. Policy instruments including funding, demand from industries & customers
- Proper incentives



Researchers and academia:
Awareness & willingness
to integrate gender dimension
into research and education,
- Proper incentives



Incentives for promoting GI in R&D



Preference	1	2	3	4
Research/ Academia	●	◐	●	◐
Industry	◐	◐	◐	●
Managing part	●	●	◐	◐
Society	●	◐	◐	●

Impact	1	2	3	4
Research/ Academia	●	●	●	◐
Industry	◐	●	◐	●
Managing Part	●	●	◐	◐
Society	●	●	◐	●

Priority setting criteria for GI using Analytic Hierarchy Process (AHP)

CRITERIA ON SELECTION AND EVALUATION POLICY

Criteria	Evaluation criteria of policy	Researcher (chronological order)	Importance of GI
Urgency	If the result of the policy satisfies the value, priority, and demand of the group in a proper timing	Dunn(1994), Ammons(2014)	important
Effectiveness	How much was achieved by the result or the valuable outcome. To what extent the achievement of the result resolved the problem	Dunn(1994), Ammons(2014)	important
Efficiency	What degree of effort is required to reach a high achievement of the result	Dunn(1994), Ammons(2014)	important
Feasibility	If the policy cost and benefit between two groups is evenly distributed. If the desirable outcome is useful and valuable. If the process is based on the agreement between interest groups or citizens.	Dunn(1994), Ammons(2014), Leach, Pelkey & Sabatier(2002)	important

Priority List by Types of Detailed Policy Instruments using AHP

Criteria	Urgency	Effectiveness	Efficiency	Feasibility	Average	Priority list
Vision planning establishment	0.53	0.58	0.52	0.58	0.18	2
Impact evaluation	0.47	0.42	0.48	0.41	0.14	3
R&D advanced mediation	0.37	0.43	0.47	0.42	0.09	4
R&D Survey, analysis. evaluation	0.22	0.20	0.20	0.21	0.04	9
Reflective assessment and planning	0.41	0.37	0.33	0.37	0.08	6
Exclusive budget installation	0.56	0.59	0.60	0.62	0.20	1
Purchase contract system	0.15	0.16	0.16	0.18	0.05	8
National standard system	0.29	0.25	0.24	0.20	0.08	5
Modification <u>m</u> echanism	0.45	0.47	0.45	0.42	0.06	7
Specialized agency management	0.31	0.33	0.34	0.33	0.04	10
Organization performance <u>e</u> valuation	0.24	0.20	0.21	0.25	0.03	11

Priority list in the field of regarding National S&T standard classification system using AHP

<u>Criteria</u>	Urgency	Effectiveness	Efficiency	Feasibility	Priority lists
Natural science	0.14	0.13	0.17	0.17	0.15
Engineering	0.20	0.19	0.23	0.19	0.20
Biomedical/brain <u>science</u>	0.38	0.39	0.33	0.35	0.37
Society of humanity & convergence in arts	0.12	0.12	0.11	0.12	0.12
Personnel infra <u>structure</u>	0.16	0.17	0.16	0.17	0.17

priority list of planning contents of national R&D project by AHP

Criteria	Urgency	Effectiveness	Efficiency	Feasibility	Priority list
Evaluation of technology environment	0.28	0.23	0.22	0.22	0.24
Current technology evaluation	0.19	0.24	0.22	0.26	0.22
Technology needs evaluation	0.28	0.29	0.33	0.28	0.30
Impact evaluation of technology result	0.25	0.24	0.23	0.24	0.24

Conclusion

Implications for improvement in the legal system of S&T for gendered innovation:

- An interagency of sustainable GI of research system support is expected to be constructed by offering legislative requirements for GI in S&T.
- The global issue of S&T should be utilized in the aspect of knowledge creation and the contents of research innovation, including the overall agenda.
- The legal system should be improved for social recognition and research to enable the proliferation of GI

Implication for S&T policy instrument and National R&D Management System

- The GI in S&T are expected to not only provide growing competition with policy research and social proliferation regarding the necessity of gender dimension, but also lead to the improvement of policy instruments.

 Awareness of the gender dimension and GI is most important

Thank you!

